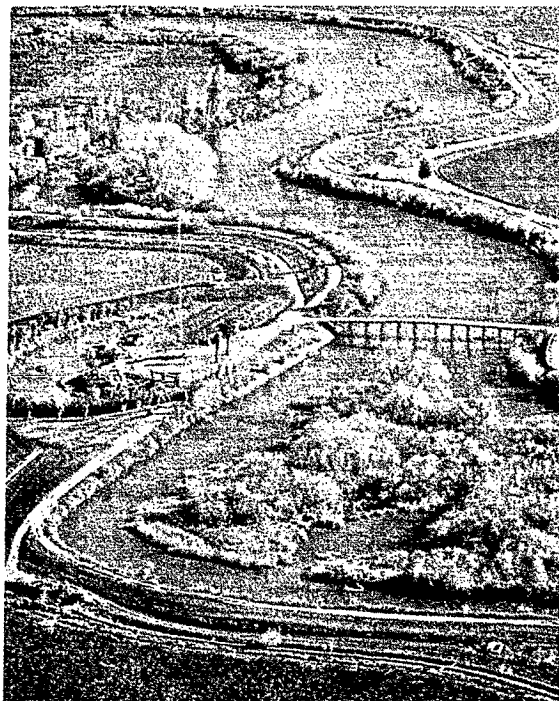




Briefing Packet

April 1997



CONTENTS

| | |
|---|-------|
| Perspective..... | i-ii |
| Key Facts..... | 1-10 |
| Budget Process..... | 11-13 |
| Overview: Ecosystem Restoration Coordination Program..... | 14-19 |
| Overview: FY 1998 Program Activities..... | 20-37 |
| Additional Background on FY 1998 Proposed Ecosystem Quality Expenditures..... | 38-46 |
| Appendix A: Proposed Five-Year Program Activities..... | 47-54 |
| Appendix B: Background..... | 55-63 |

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Mission of the CALFED Bay-Delta Program

To develop a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta system.

The agreement to join in the CALFED Program "is good for economic growth, good for the environment, and good for California and the nation."

President Bill Clinton

"California history is replete with accounts of...water wars...But too often they have been wars without winners. There is too much at stake for us to risk losing again."

Governor Pete Wilson

"We can pay for the fix now, or we can pay later in ways too costly to be calculated: jobs, farmland, natural habitat and lifestyle."

Editorial, The Contra Costa Times

PERSPECTIVE

- The capacity of the Bay-Delta to meet the varied demands placed upon it is significantly impaired today.
- The CALFED Bay-Delta Program manages the open planning process charged with resolving that weakness.
- In addition to being a source of drinking water for 22 million Californians, the Bay-Delta supports jobs, habitat, food supply, recreation, wildlife, and industry in the world's 7th largest economy.
- The CALFED Bay-Delta Program is a unique collaboration among state and federal agencies, and the state's leading urban, agricultural, and environmental interests, to address and resolve challenges in the Bay-Delta system.
- The "stakeholder" community, the State Legislature, the Governor and the people of California, all agree that the Bay-Delta is in serious peril and that solutions for saving it must be developed immediately, as evidenced by the passage of Proposition 204 late last year, investing over a half-billion dollars in the CALFED Program.
- Good progress has been made to date. In less than 18 months, three proposed solution alternatives have been developed. A draft preferred alternative will be released in 1997, and the final preferred alternative will be selected by fall 1998.
- The continuing success of the CALFED Bay-Delta Program is critical, and dependent upon several key factors:

Continued partnerships — Implementation of any solution developed by the CALFED Bay-Delta Program will be a multi-decade effort. Partnerships among agencies and with stakeholders formed during this process must continue for the duration — they are a hallmark of the Program.

Funding support — Cost-sharing by the federal government, the State of California and the “stakeholder” community has been an essential factor in progress and success to date, and will need to continue. The California Legislature’s authorization, and the people’s passage, of Proposition 204 reflects both their commitment and prudent foresight.

Interest and participation — The CALFED Bay-Delta Program has brought together an unprecedented collaborative effort among a broad spectrum of public and private entities — a process which will require continued high levels of interest and participation by all, for the duration of implementation.

Collaboration — The CALFED Bay-Delta Program enjoys widespread support due to its open and collaborative decision-making process. This unique coalition of environmental, urban and agricultural interests working together is the model that offers the best hope for resolving water management and environmental problems associated with the Bay-Delta system.

- The Bay-Delta, as the hub of California’s water system, has for decades been the focus of competing interests — economic and environmental, urban and agricultural — and it has suffered from gridlock. The issues are complex, and if they continue unresolved the future vitality of the state will remain at risk.

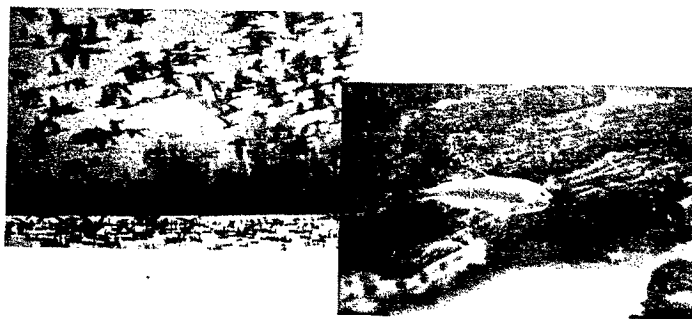
KEY FACTS

WHAT'S AT STAKE?

- California's principal source of drinking water — more than 22 million residents get their water from the Bay-Delta system.
- The largest wetland habitat and largest estuary in the West, and a critical nursery ground and migration corridor for more than 120 species of fish and wildlife.
- A key component of the state's \$18-billion agricultural industry, supplying irrigation water to millions of acres for 200 crops, including 45 percent of the nation's fruits and vegetables. One in ten California jobs is dependent upon agriculture.
- Silicon Valley manufacturing, which requires a reliable supply of high quality and dependable quantities of water from the Bay-Delta watershed to drive the San Francisco Bay Area's regional economy.
- Southern California's multi-billion-dollar economy, which is dependent upon a reliable water supply from the Delta for commerce and industry, as well as to mix with more saline Colorado River water to protect the region's groundwater basins.
- The home to one of the most productive natural salmon fisheries on America's west coast, serving to maintain a commercial fishery and significant recreational fishing opportunities supporting tourism and other economic multipliers.
- Ultimately, the continued vitality of California's economy, the world's 7th largest, hinges upon the success of the CALFED Bay-Delta Program to ensure the reliability of current and future water supplies, while protecting the Bay-Delta's unique natural heritage.

WHAT'S BROKEN?

- California is a semi-arid state with coastal urban and agricultural regions dependent on water imported from the Bay-Delta's watershed. For the past 150 years, development activities such as hydraulic mining, dredging and channelization, flood control, unscreened diversions, pollution, and large-scale water supply projects have contributed to degradation of the Bay-Delta's ecosystem.
- The confluence of two of California's largest rivers, the Sacramento and San Joaquin, forms the 738,000-acre Delta — the heart of the state's water system. It serves California's economic and environmental well being and it is a critical resource at risk.
- Key Concerns:
 - ◆ Water quality is a continuing concern for both drinking water uses and agriculture.
 - ◆ Water supplies have become less reliable.
 - ◆ Fish and wildlife populations and habitat have deteriorated.
 - ◆ The Delta levee system, protecting agricultural lands and drinking water quality, is vulnerable to natural disaster as a consequence of benign neglect and a lack of financial resources to perform needed maintenance.



Tremendous Pre-Existing Investment at Stake

- The state and federal governments have invested billions of dollars in the Bay-Delta system to provide water supply, environmental and economic security over the last century.
- This joint investment has reaped exceptional benefits for the state and the nation. However, the continued viability of California's water infrastructure and the Bay-Delta ecosystem's health are at risk.
- By addressing these issues now, the threat of losing both the Bay-Delta and the dividends from the pre-existing investment will be averted.
- Through coordination and integration, the CALFED Bay-Delta Program is building upon the resources and strategies of the Central Valley Project Improvement Act (CVPIA) and other state and federal programs, resulting in a whole larger than the sum of its parts.
- California's and the nation's investment in the State Water Project and the Federal Central Valley Project is better protected through increased operational flexibility that will be enhanced by the CALFED Bay-Delta Program.
- Billions of dollars of California's economic output is at risk because of the potential for a sudden catastrophic failure of the Bay-Delta water supply hub.

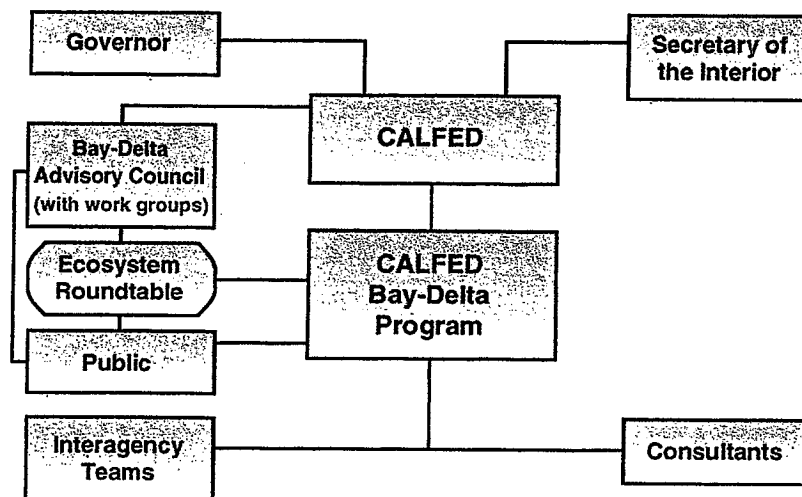
Significant New Public Investment Reflects Commitment & Support

- A federal authorization for \$430 million over a three-year period to contribute to the CALFED Bay-Delta Program effort was secured late in 1996. The President's FY 1998 Budget, released on February 6, 1997, contains \$143 million to be spent specifically in pursuit of CALFED objectives.
- Through bipartisan efforts in the legislature, the California Governor's office, and a unique coalition of stakeholder groups, the CALFED Bay-Delta Program was given an additional shot in the arm by last year's passage of California's billion dollar Proposition 204.
- By approving Proposition 204, a significant majority of Californians acknowledged that the status quo in the Bay-Delta is unacceptable, and that finding and implementing solutions is worth funding.
- More than \$450 million has been provided for CALFED Bay-Delta Program activities, including \$390 million for implementation of the ecosystem common program upon certification of the Programmatic EIR/EIS, and completion of a cost-sharing agreement with the federal government.

WHAT IS THE CALFED BAY-DELTA PROGRAM?

- A state and federal partnership charged with developing a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta system.
- Established by California Governor Pete Wilson and Secretary of the Interior Bruce Babbitt.
- Builds upon the historic 1994 Bay-Delta Accord in which environmental, agricultural and urban interests agreed to work together to solve problems in the Delta.
- Action categories include ecosystem restoration, water quality improvement, levee stability, water use efficiency, and water storage and conveyance.
- A federally chartered Bay-Delta Advisory Council, comprised of 34 water leaders from throughout California, provides regular guidance and is one of many avenues for public input to the Program.
- A collaborative effort with Bay-Delta "stakeholders" — urban and agricultural water users, fishing interests, environmental organizations, businesses, and others — who contribute to Program design and to the problem-solving/decision-making process.

Program Structure



PROGRAM OBJECTIVES & SOLUTION PRINCIPLES

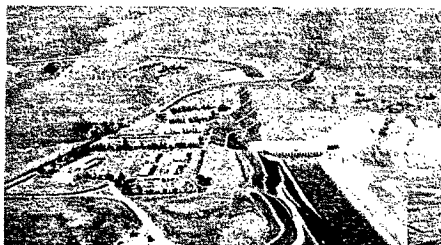
It is the capability of an alternative to optimize satisfaction of both the CALFED Program's objectives and solution principles, which will determine the selection of the draft preferred alternative.

Program Objectives

- Provide good water quality for all beneficial uses.
- Improve and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta to support sustainable populations of diverse and valuable plant and animal species.
- Reduce the mismatch between Bay-Delta water supplies and current and projected beneficial uses dependent on the Bay-Delta system.
- Reduce the risk to land use and associated economic activities, water supply, infrastructure, and the ecosystem from catastrophic failure of Delta levees.

Solution Principles

- Affordable
- Equitable
- Durable
- Implementable
- Reduced conflict among competing interests
- No significant redirected impacts



THE CALFED BAY-DELTA PROGRAM

AN EXAMPLE OF "REINVENTING GOVERNMENT"

Unprecedented Public Involvement

- Because water touches all Californians, broad public participation and outreach is a critical component of the CALFED Bay-Delta Program, and has been given extraordinary emphasis.
- The CALFED Bay-Delta Program is an historic collaborative effort involving individuals, organizations, businesses and the water community.
- The CALFED Bay-Delta Program proactively solicits and receives significant and meaningful public input — to help shape a viable Bay-Delta solution.
- Numerous public meetings, in communities from Redding to San Diego, and frequent public technical workshops in Sacramento have been a cornerstone of the process, and will continue.

Unique Facets of the CALFED Bay-Delta Program

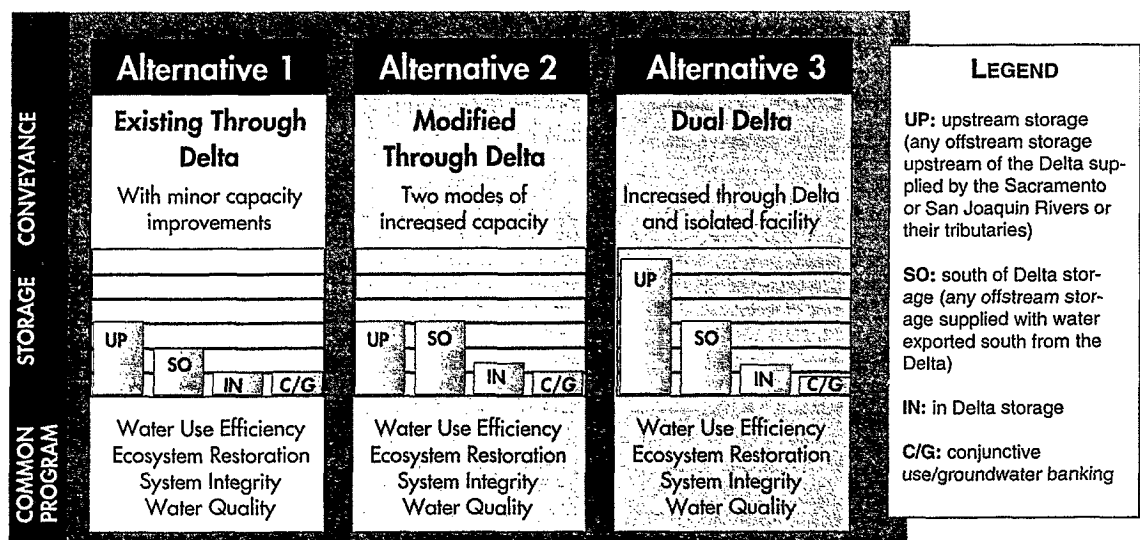
- Exceptional cooperation between state and federal governments, and an example of government "reinventing" itself to solve problems across agency jurisdictions.
- The largest ecosystem restoration project in United States history — pulling together new resources with multiple pre-existing environmental restoration efforts to address the Bay-Delta system in a coordinated and more efficient and effective manner.
- After decades of gridlock, major urban, agricultural and environmental interests have moved beyond past animosities to support, participate in, and contribute to the CALFED Bay-Delta Program.



PROGRESS TO DATE

- Phase I of the CALFED Bay-Delta Program's three-phase process was completed in fall 1996. Three conceptual alternatives were developed with the benefit of significant public input at public meetings and technical workshops as part of a public scoping process.
- All three alternative solutions are designed to address Bay-Delta problems comprehensively:
 - ◆ They share common programs to address water use efficiency measures, ecosystem restoration, water quality protection, and levee improvements.
 - ◆ They also include a range of water storage options.
- ◆ They differ in their method of conveying water from north of the Delta to south of the Delta.
 - Alternative 1 uses the existing system of Delta channels, and makes only minor modifications.
 - Alternative 2 uses the existing system but with significant modifications to its configuration and carrying capacity to improve the efficiency of water transfer and reduce environmental impacts.
 - Alternative 3 uses the existing system, with significant changes, and adds an isolated facility to move water around the Delta.

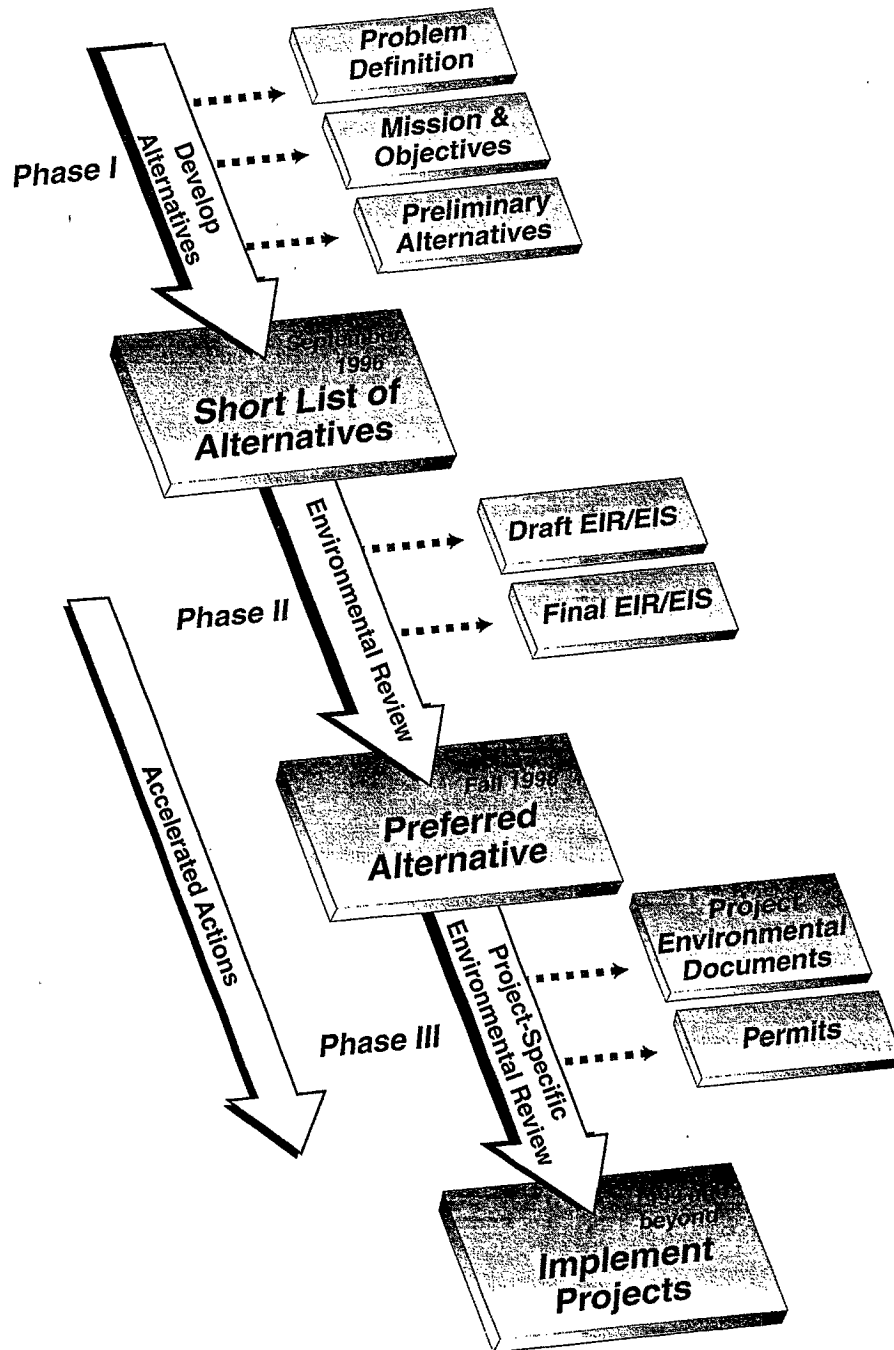
Structure of Alternatives



WHAT'S NEXT? — PHASE II

- Phase II of the CALFED Bay-Delta Program's three- phase process is just beginning.
- Phase II involves a six-step process in which:
 - ◆ a preferred alternative will be identified and adopted through more detailed analysis of the three alternatives developed in Phase I, and
 - ◆ a programmatic EIR/EIS will be certified documenting the various costs, benefits and consequences of each alternative.
- The six steps of Phase II include:
 - ◆ Component refinement
 - ◆ Detail interactions between components
 - ◆ Describe operations and identify benefits and costs
 - ◆ Analyze impacts of the alternative programs
 - ◆ Prepare draft programmatic EIR/EIS
 - ◆ Prepare final programmatic EIR/EIS
- A final preferred alternative will be selected upon completion of Phase II in fall 1998. Continuing extensive public participation will extend throughout this EIR/EIS process.
- Phase III, site specific project analysis and implementation, will begin in late 1998 and last for decades.
- The CALFED Bay-Delta Program is about half way through its three-year plan development effort.

Program Phases



Planning Now for 1998 CALFED Bay-Delta Program Activities

- Many of the actions included in the three alternatives identified in Phase I are common to all three, and could be implemented immediately upon completion of Phase II under existing authorities if funding were available.
- Even before Phase II is completed, there will be opportunity to begin work on projects consistent with strategies developed by the CALFED Bay-Delta Program as being needed for recovery of the Bay-Delta system.
- Many of these projects, on which there is broad support, center around ecosystem restoration, such as habitat improvements, wetland restoration, and watershed restoration efforts in upstream areas throughout the Sacramento and San Joaquin river systems.

BUDGET PROCESS

HOW CAN MONEY BE SPENT BEFORE THE COMPLETION OF THE EIR/EIS?

- While the details of the preferred alternative will not be finalized until Fall 1998, the proposed FY 1998 program concentrated on activities that will be beneficial to the long-term Program regardless of which alternative is ultimately chosen.
- The FY 1998 program includes only activities that are consistent with each of the three alternatives and also provide early implementation benefits. This implementation will also provide valuable information for use in adaptively managing the system in later years of the Program.
- Many of the actions included in the alternatives are common to all three and could be implemented now under existing authorities if funding were available. Therefore, even before the programmatic environmental documentation is completed, there is an opportunity to begin work on projects under current authorizations which will contribute to system recovery.
- However, projects pursued for early implementation must:
 - ◆ be justified independently of the Program by the lead agencies for that project;
 - ◆ be accompanied by an adequate environmental document, the preparation of which includes consultation with responsible and trustee agencies; and
 - ◆ not prejudice the ultimate decision on the Program.
- Early action projects and programs will be those for which there is existing broad support. Many of these center around ecosystem restoration, such as habitat improvements for many specific species of concern, wetland restoration efforts in upstream areas throughout the Sacramento and San Joaquin river systems.
- The Secretary of Interior will be required to approve spending plans outlining how the money appropriated for FY 1998 will be spent.

WHAT DOES THE PRESIDENT'S BUDGET INCLUDE FOR THE CALFED BAY-DELTA PROGRAM?

The President's FY 1998 Budget, released on February 6, 1997, contains \$143 million to be spent specifically in pursuit of CALFED objectives. This money is appropriated to the Bureau of Reclamation to hold for the participating federal CALFED agencies as spending decisions are made.

- The Program is currently evaluating three potential alternatives. Estimated capital costs generally fall in the \$4 to \$8 billion range, and implementation of the preferred alternative may take 20 to 30 years.
- Given this length of time, it is important to begin implementation as soon as practical. Taking action now on ready projects lessens the time frame for implementation and early results will build support and commitment for implementing the full alternative.
- Stakeholder funding has totaled almost \$22 million to date, and \$10 million of more in additional funding is expected in 1997.
- State funding from Proposition 204 (passed by voters on November 5, 1996) includes \$60 million for Category III (ecosystem restoration measures that are not directly related to Delta outflow, some of which may include screening water diversions, waste discharge control and habitat restoration); \$93 million as cost-share for the Central Valley Project Improvement Act; \$390 million available for habitat restoration once the preferred alternative is selected, the EIR/S is certified and a formal state/federal cost-share agreement has been implemented; and additional funding for watershed management, water quality improvements and levee improvements.
- Federal funding authorized through the California Bay-Delta Environmental Enhancement and Water Security Act (HR4126) and included in the President's Budget is designed to match state funding through Proposition 204 and stakeholder funding.

WHO WILL DECIDE HOW AND WHERE TO SPEND THE MONEY?

- During the course of FY 1998, money to be spent on CALFED priorities will come from a variety of sources—state funds under Proposition 204, federal funds appropriated for FY 1998, stakeholder contributions through the Category III effort and a variety of existing programs and funds.
- Expenditure of state funds from Proposition 204, federal funds appropriated for FY 1998, and stakeholder contributions to Category III will be done through a collaborative process that involves stakeholder input through the Ecosystem Roundtable and CALFED decision-making. This process is described in detail starting on page 14.

- The key groups involved in project decision making include the federally chartered Bay Delta Advisory Council (BDAC), the Ecosystem Roundtable (BDAC subcommittee)¹, and CALFED, where final funding decisions will be made.
- Final accountability for federal funds will rest with the Secretary of Interior.
- Funding decisions will be made on a six-month planning cycle. The four steps in the planning cycle will be to identify/revise priorities, identify actions to address the priorities, fund actions, and implement the actions. Decisions to fund actions should be made twice a year, in August and January.
- In each planning cycle, CALFED staff will develop a draft set of restoration projects and programs to be considered for funding.
- This list of projects recommended for funding will go to the Ecosystem Roundtable for their consideration, will be presented to BDAC, and will then go to CALFED for a final decision.
- Details on this process follow immediately.

¹The mission of the BDAC Ecosystem Roundtable is to provide advice on development of an annual integrated planning process for restoration project selection and on integration and coordination with existing state and federal restoration programs to increase overall restoration effectiveness.

OVERVIEW: ECOSYSTEM RESTORATION COORDINATION PROGRAM

The following is an overview of the Ecosystem Restoration Coordination Program, which focuses on identifying environmental restoration projects for early implementation and coordination with other restoration programs, to ensure consistency with the long-term ecosystem restoration program of the CALFED Bay-Delta Program. The roles and responsibilities of various groups involved in this effort are described.

INTRODUCTION

The December 15, 1994 Bay-Delta Accord included a commitment to fund \$180 million in non-flow related ecosystem restoration actions to improve the health of the Bay-Delta ecosystem, commonly referred to as "Category III." To date, urban water users have contributed \$21.7 million, and Proposition 204 included \$60 million in state contributions. Specific factors identified as part of the Category III mandate include unscreened water diversions, waste discharges and water pollution prevention, impacts due to harvest, poaching, land derived salts, exotic species, fish barriers, channel alternations, loss of riparian wetlands, and estuarine habitat degradation.

In 1996, the CALFED Bay-Delta Program identified two important needs with respect to current ecosystem restoration activities. The first need was to improve coordination of existing state and federal habitat restoration programs so they could efficiently provide greater ecosystem benefits. The second need was to administer the Category III program so it was integrated with other habitat restoration efforts.

The broad consensus on the need to coordinate near-term habitat restoration efforts led to the creation of the CALFED Ecosystem Restoration Coordination Program. This program will address both of the identified needs: administration of the Category III program and coordination with other programs, such as Central Valley Project Improvement Act (CVPIA), involved in the restoration of the Bay-Delta ecosystem.

In addition to these efforts to coordinate near-term habitat restoration, the CALFED Bay-Delta Program is also working to coordinate on-going CALFED agency activities that can address other long-term program elements such as water quality and levee system integrity.

RELATION TO LONG-TERM CALFED BAY-DELTA PROGRAM

The CALFED Bay-Delta Program is developing a long-term program to address four major areas of concern in the Bay-Delta including ecosystem health, water quality, water supply reliability and levee system integrity. Alternatives will be evaluated in a Programmatic Environmental Impact Report/Statement (Programmatic EIR/EIS) that is scheduled for public release in November 1997. A solution that addresses the four resource areas must also

meet six solution principles: It must be affordable, equitable, durable, implementable, reduce conflicts in the system, and have no significant redirected impacts.

As part of the development of the Bay-Delta solution, a comprehensive ecosystem-wide plan for restoration and management of the Bay-Delta ecosystem is being developed. The resulting Ecosystem Restoration Program Plan (ERPP) will provide the foundation for the **long-term** ecosystem restoration effort that may take several decades to implement. The ERPP will be included in each of the alternatives being evaluated in the Programmatic EIR/EIS. With the ERPP providing the foundation for the **long-term** ecosystem restoration, the Restoration Coordination Program is focussed on those restoration actions in the ERPP that can be started in the **near-term**.

The ecosystem restoration strategy articulated by the ERPP is designed to reverse the decline in ecosystem health by reducing or eliminating factors which degrade habitat, impair ecological functions, or reduce the population size or health of species. The ERPP will focus on those factors that cause direct mortality of plants and animals in the system, or cause indirect mortality by degrading habitat conditions or functions.

The **Ecosystem Restoration Coordination Program** is directly related to this effort. It is developing a planning and project selection process to begin early implementation of the ERPP using existing programs and commitments. This process focuses primarily on Category III funding decisions for 1997 and 1998 and coordination with CVPIA, but also begins to integrate restoration efforts of other closely related restoration programs such as the Four Pumps Agreement and the Tracy Fish Agreement. Potential near-term projects include fish screens and ladders, riparian habitat restoration, wetlands development, ecosystem restorative watershed management actions, and other Bay-Delta ecosystem restoration actions.

The initial priorities for allocating ecosystem restoration funds in 1997 have been identified as: 1) actions to assist in the recovery of aquatic species that are listed as threatened or endangered, of special concern, or desirable and in "greatest need"; and 2) actions to assist in the restoration of habitat types that have experienced the greatest decline, and which are important to the priority species. Semi-annual updates of the work plan will be prepared to respond to additional priorities, changes in funding levels, and progress made in earlier years. CALFED agencies will approve the initial work plan and the semi-annual updates.

Near-term restoration actions will be evaluated to ensure that they do not prejudice the selection of the long-term program alternatives being evaluated in the Programmatic EIR/EIS. They will also be evaluated against solution principles where appropriate to guide near-term restoration actions. For example, effective restoration actions should be durable, implementable, and cost-effective. Because the near-term restoration actions and other early implementation opportunities can only occur through existing programs and must not prejudice the selection of the long-term alternative, it may not, however, be possible to fully satisfy the equity solution principle.

FUNDING SOURCES (See Chart 1)

Funding sources for near-term restoration activities include \$60 million in state Proposition 204 funds and an expected additional stakeholder contribution of \$10 million to fund the ecosystem restoration commitments in the Bay-Delta Accord (Category III). In addition, Congress authorized \$430 million over the next three years to fund the federal share of Category III and initial implementation of the ERPP. The President's Budget for federal FY 1998 proposes an appropriation of \$143 million under this authorization for Bay-Delta ecosystem restoration. Expenditure of these federal funds will be coordinated in the process described below.

ROLES AND RESPONSIBILITIES (See Chart 2)

The roles of each group involved in the allocation of funding from stakeholder Category III contributions, state funding from Proposition 204 for Category III, and federal funding appropriated under the authorization for \$430 million are detailed below. Some of the roles and responsibilities described are interim and will probably be replaced when the long-term alternative is selected and implemented.

Bay-Delta Advisory Council (BDAC) - BDAC is a federally chartered advisory committee. Its mission is to provide policy advice on the development of the long-term program. It has established several fact-finding Work Groups to address differing issues associated with the long-term program. In addition, BDAC has appointed a subcommittee, the Ecosystem Roundtable, to provide advice on near-term ecosystem restoration efforts. The CALFED Bay-Delta Program Restoration Coordination Program staff will provide BDAC with regular updates on the planning and project selection process as well as advice from the Ecosystem Roundtable.

Ecosystem Roundtable - The Ecosystem Roundtable is a subcommittee of BDAC. The Ecosystem Roundtable provides stakeholder input on the coordination of existing and anticipated state and federal ecosystem restoration management programs including ecosystem restoration projects to be funded by the state, federal, and stakeholder contributions to Category III. This will be done in a manner that fosters cooperative planning and implementation with all agencies and stakeholders, that addresses high priority environmental needs, and that informs future restoration efforts. Specifically, the Ecosystem Roundtable will provide advice on :

- coordination of CALFED ecosystem restoration and management projects and programs with other complementary environmental programs being implemented in the Bay-Delta ecosystem, and
- establishing priorities for near-term ecosystem restoration and selection of projects based on those priorities.

CALFED - CALFED agencies will select projects and programs for implementation. The Secretary for Resources and the Secretary of the Interior will have final fiscal responsibility for State and Federal funds respectively. CALFED agencies will be regularly updated on the progress of the Restoration Coordination Program as the planning process is implemented and CALFED agencies will attend the Ecosystem Roundtable meetings.

CALFED Bay-Delta Program Restoration Coordination Program - The Restoration Coordination Program staff will be responsible for the day-to-day management of the planning process. This includes seeking technical input from experts, preparing reports, and coordinating the project selection process.

Restoration Technical Teams - Technical teams consisting of agency, academic and stakeholder specialists will provide input on what stressors and limiting factors are most affecting the priority species and habitats, and the types of restoration actions needed to address these stressors and limiting factors and alleviate their impacts. The teams will be organized by geographic area such as the San Joaquin River and tributaries, Sacramento River and tributaries, Delta/Suisun Bay, American River, and North Bay. Additional issue based teams, such as water quality, may be needed. An umbrella team, representing stakeholder and agency biologists, will provide the continuity between the technical teams.

PROJECT SELECTION PROCESS (See Chart 3)

With the ERPP providing the foundation for the **long-term** ecosystem restoration, the Restoration Coordination Program is focussed on those restoration actions in the ERPP that can be started in the **near-term**. The Restoration Coordination Program will use the following four step planning and project selection process. Each step of this process will be reviewed and updated as needed so projects can be funded on a semi-annual basis. The attached figure provides an overview of the process.

Step 1: Identify Near-Term Priorities - The CALFED Restoration Coordination Program staff, assisted by technical teams, will prepare an implementation strategy which identifies the near-term priorities. The strategy will provide guidance on which species, habitat types, and ecosystem processes should be included in the next funding cycle and how they should be prioritized. The strategy will look toward the long-term implementation needs detailed in the ERPP but will focus on those of greatest urgency and those providing the greatest early benefits considering the availability of funds.

The initial priorities for allocating ecosystem restoration funds in 1997 have been identified as: 1) actions to assist in the recovery of aquatic species that are listed as threatened or endangered, of special concern, or desirable and in "greatest need"; and 2) actions to assist in the restoration of habitat types that have experienced the greatest decline, and which are important to the priority species.

Step 2: Identify Limiting Factors and Stressors and Actions to Address Them - The CALFED Restoration Coordination Program staff, assisted by the technical teams, will prepare a workplan based the near-term priorities developed in Step 1. Beginning with this strategy, the work plan will identify:

- a summary of the strategy including priorities for funding;
- a summary of the limiting factors or stressors that need to be addressed to achieve those priorities; and
- specific actions or the types of actions that need to be undertaken to further define and address the limiting factors.

Semi-annual updates of the work plan will be prepared to respond to additional priorities, changes in funding levels, and progress made in earlier years. CALFED agencies will approve the initial work plan and the semi-annual updates.

Step 3: Prepare Package to Solicit Grant Applications and Development of Evaluation Criteria - The CALFED Restoration Coordination Program staff, assisted by agency personnel and by outside technical experts where possible, will prepare a package to guide selection of individual projects and programs consistent with the work plan.

Project and program proposals can come from a variety of sources including special districts, state and federal agencies, local governments, non-profit organizations and other organizations interested in ecosystem restoration. A package will be prepared to solicit grant applications from outside parties and will be widely advertised and circulated. Guidance will also be developed for state and federal agency programs. Criteria for selection of restoration actions will be prepared and applied to grant applications from outside parties as well as proposed agency programs. The criteria will be used to guide selection of actions to address the priority species and habitats. The CALFED agencies will approve the final evaluation criteria and the package soliciting grant applications.

Step 4: Recommend Projects and Programs -The CALFED Restoration Coordination Program staff, working with technical experts, will review and rank the proposals using the evaluation criteria developed in Step 3. An overall draft list of recommended projects and programs, including "agency directed" and those proposed by outside parties, will be forwarded to the Ecosystem Roundtable for its consideration.

The list of recommended projects and programs along with the advice from the Roundtable will be forwarded to BDAC for its consideration. BDAC will relay its advice to the CALFED agencies who will make the final decision.

Restoration Coordination

Funding Sources

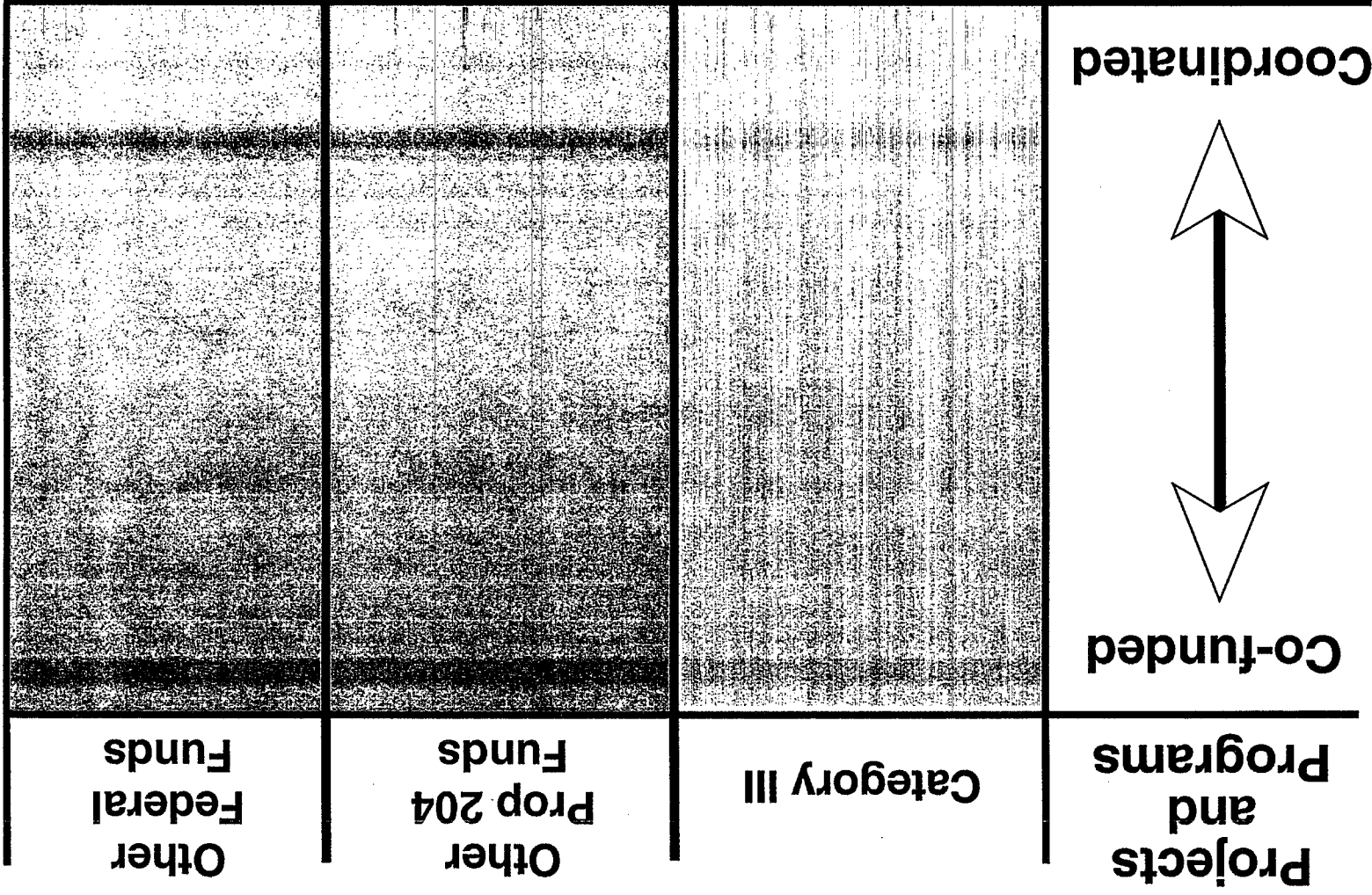
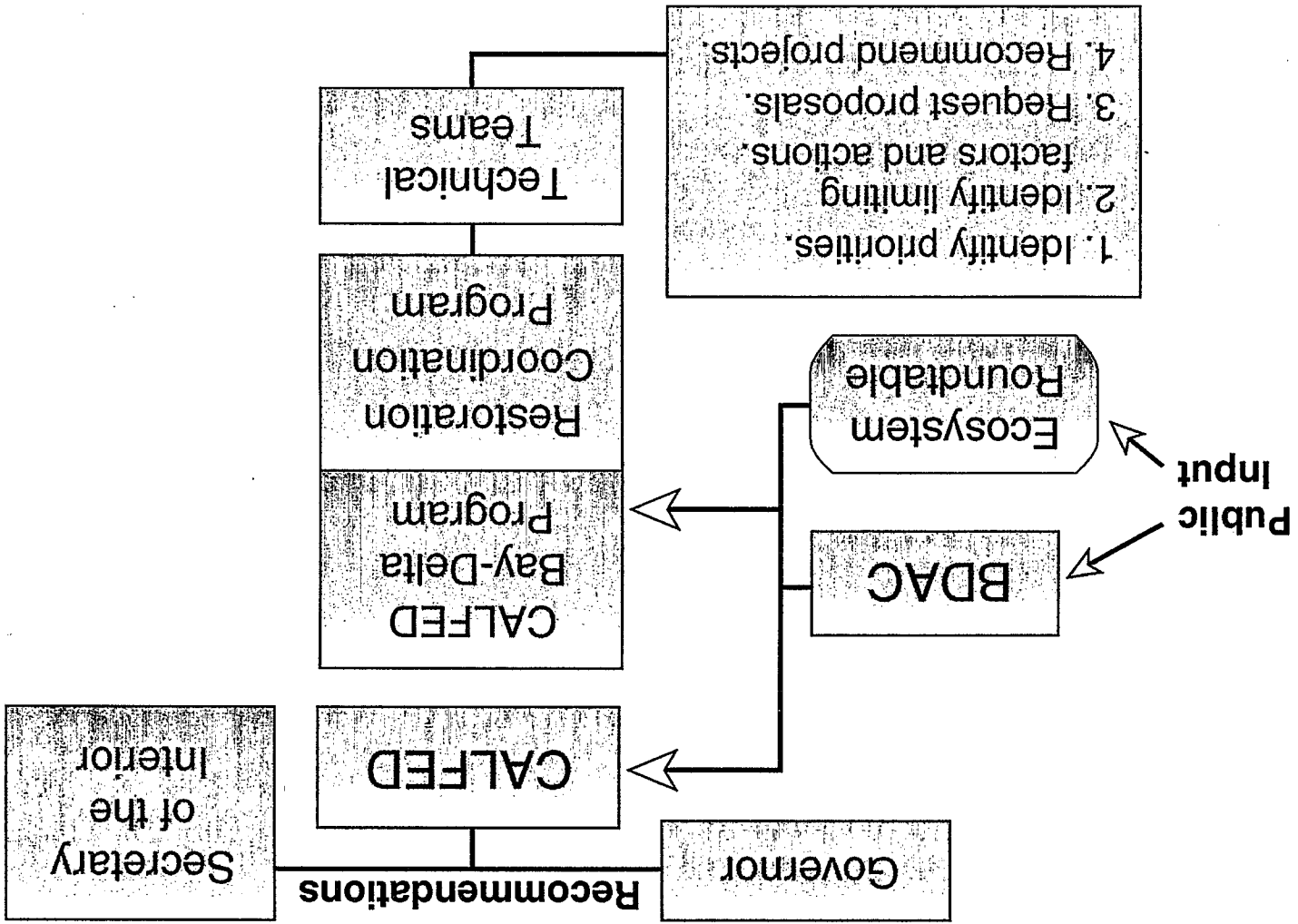
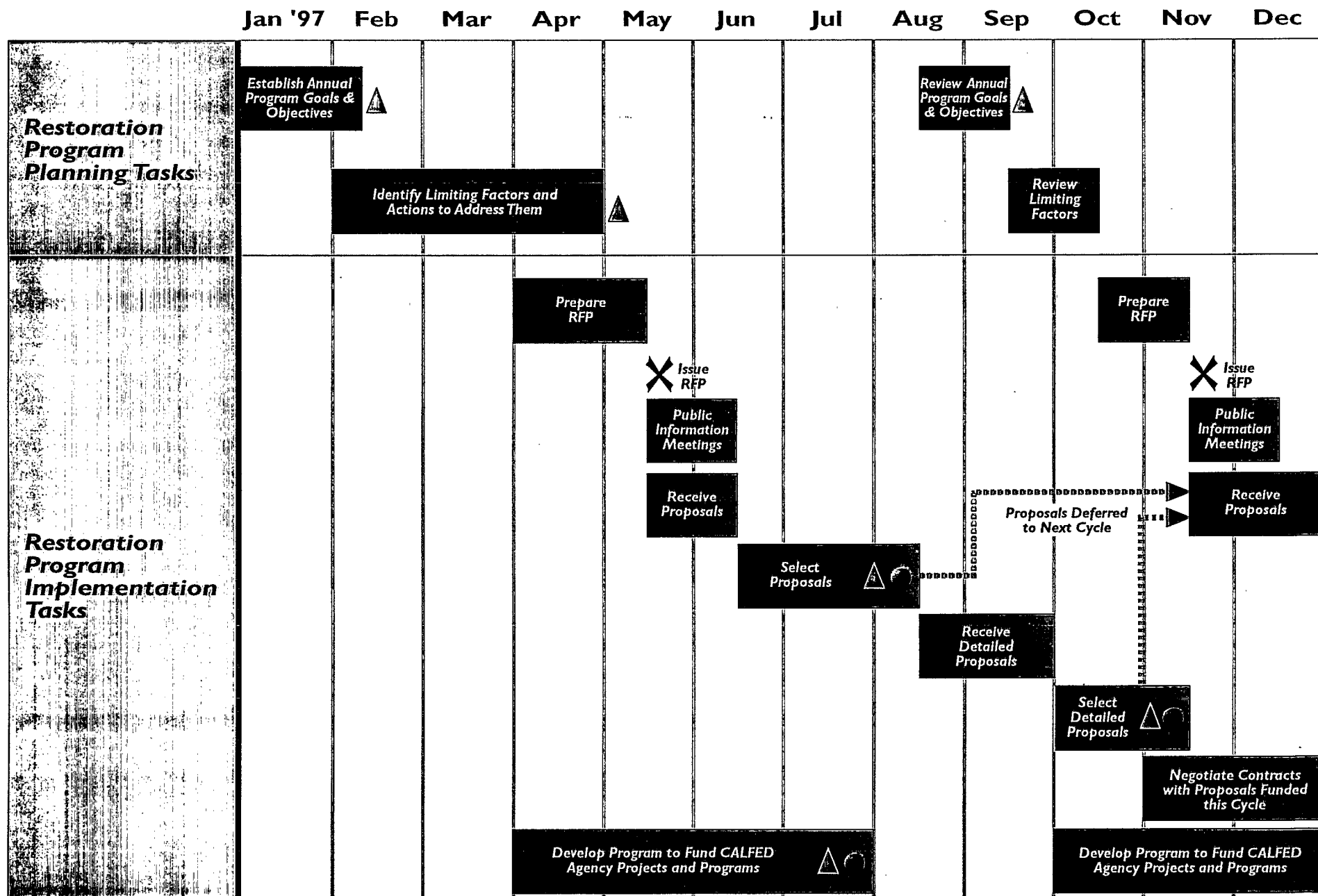


Chart 1

Restoration Coordination Decision-Making



CALFED Restoration Coordination Planning Process



139875.ZZ.ZZ 2-Step Process 4-8-97/bm

Revision: 04-08-97

▲ = Roundtable Recommendations ● = CALFED Decision Point

Chart 3

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COORDINATION

The Restoration Coordination Program seeks to maximize the cost-sharing opportunities between CALFED/Category III and other ecosystem restoration funding sources. For instance, Restoration Coordination staff have identified many Central Valley Project Improvement Act (CVPIA) restoration activities that are closely aligned with those of CALFED. They have been working with CVPIA staff on a variety of tools that can be used to better coordinate these two large restoration efforts. Some of the concepts being developed include joint development of priorities and joint solicitation and review of projects to address these priorities. Staff are also working with other programs such as the Four Pumps Program administered by DWR and DFG and the Tracy Fish Agreement program administered by USBR and DFG. Coordinating various restoration programs in the Bay-Delta ecosystem will maximize the effectiveness of available funding and will jump start ecosystem recovery.

RESTORATION RESERVE

As shown by the 1997 New Year's Day floods, new opportunities and challenges in ecosystem restoration can develop quickly. To provide resource flexibility to take advantage of opportunities, the Restoration Coordination Program will maintain a restoration reserve fund for the purpose of providing funding flexibility to respond to opportunities which occur out of phase with the normal funding cycle. These funds shall be for projects which are related to an emergency, unique opportunity, or can leverage matching monies which are time sensitive.

When the restoration reserve fund is used, the program will identify the rationale for providing funding outside the normal funding cycle. Any projects funded through the restoration reserve will receive public review through the Roundtable and BDAC.

OVERVIEW: PROPOSED FISCAL YEAR 1998 PROGRAM ACTIVITIES AND COST ESTIMATE

The CALFED Bay-Delta Program has prepared estimates of activities and costs to begin early implementation of the Program. This paper provides an overview of the proposed FY 1998 program and serves as an introduction to the attached cost matrix.

INTRODUCTION

The CALFED Bay-Delta Program is developing a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta system. This Program is critical to the future of California because the Bay-Delta system is the largest estuary on the West Coast, providing habitat for 120 fish and wildlife species, including many listed as threatened or endangered. The Bay-Delta system is also critical to California's economy, providing drinking water for two-thirds of Californians and irrigation water for 200 crops, including 45 percent of the nation's produce.

The CALFED Bay-Delta Program is preparing a Programmatic EIR/EIS and is scheduled to select a final preferred alternative in Fall 1998. This preferred alternative must address Bay-Delta problems in ecosystem quality, water quality, levee system vulnerability, and water supply reliability. The solution to these problems will require an intensive program costing billions of dollars with implementation extending over several decades. It will require funding from State, Federal, and stakeholder sources and close coordination with other ongoing programs.

PROPOSED FY 1998 PROGRAM

The Program is currently evaluating three potential alternatives. Estimated capital costs generally fall in the \$4 to \$8 billion range, and implementation of the preferred alternative may take 20 to 30 years. Given this length of time, it is important to begin implementation as soon as practical. Taking action now on ready projects lessens the time frame for implementation and early results will build support and commitment for implementing the full alternative.

Stakeholder funding has totaled almost \$22 million to date, and \$10 million or more in additional funding is expected in 1997. State funding from Proposition 204 (*passed by voters on November 5, 1996*) includes \$60 million for Category III; \$93 million as cost share for the Central Valley Project Improvement Act; \$390 million available for habitat restoration once the preferred alternative is selected, the EIR/S is certified and a formal State/Federal cost-share agreement has been implemented; and additional funding for watershed management, water quality improvements and levee improvements. Federal funding authorized through the California Bay-Delta Environmental Enhancement and Water Security Act (HR4126) is designed to match State funding through Proposition 204 and stakeholder funding.

Each of these alternatives includes an array of specific actions which will provide a comprehensive solution to the Bay-Delta issues of ecosystem quality, water quality, levee system vulnerability, and water supply reliability. The differences between the alternatives lie mainly in the method of transporting water through and around the Delta, and the amount of additional storage which would complete each alternative.

While the details of the preferred alternative will not be finalized until Fall 1998, the proposed FY 1998 program concentrates on activities that will be beneficial to the long-term Program regardless of which alternative is ultimately chosen. The FY 1998 program includes only activities that are included in each of the three alternatives and also provide early implementation benefits. This implementation will also provide valuable information for use in adaptively managing the system in later years of the Program.

The following cost matrix includes potential funding levels and potential funding agencies which are based solely on CALFED staff's judgement. The cost matrix is followed by more detailed text descriptions of the proposed activities.

The cost matrix and supporting text include activities listed specifically for ecosystem quality, water quality, levee system vulnerability, and water supply reliability. However, many of the activities will produce multiple benefits across these four areas. The costs were developed for specific actions, but more detailed studies in later phases of the Program may shift money between actions with similar results. For instance, these studies may indicate that the Program's water quality objectives can be met more effectively by adjusting the balance between land conversion for water quality improvement and levels of wetlands treatment.

Actions common to all three alternatives ready to be implemented in FY 1998.

Many of the actions included in the alternatives are common to all three and could be implemented now as part of existing authorities if funding were available. Therefore, even before the programmatic environmental documentation is completed, CALFED has the opportunity to begin work on a set of projects identified as needed for system recovery. Because these actions are included in all three of the Program alternatives, they can be implemented prior to completion of the programmatic environmental documentation. However, projects pursued for early implementation must:

- ◆ be justified independently of the Program by the lead agencies for that project;
- ◆ be accompanied by an adequate environmental document, the preparation of which includes consultation with responsible and trustee agencies; and,
- ◆ not prejudice the ultimate decision on the Program.

These are projects and programs, especially related to water quality and ecosystem restoration, on which there is broad support. Many of these center around ecosystem restoration, such as habitat improvements for many specific species of concern, wetland restoration efforts throughout the system, and watershed restoration efforts in upstream areas throughout the Sacramento and San Joaquin river systems.

Process for Approving Early Implementation Projects

Program level actions have been identified (such as restoration of 10,000 to 20,000 acres of permanent and seasonal wetlands habitat in the Delta). The process to identify specific projects will include both agencies and stakeholders. The key groups involved in project decision-making processes include: 1) the staff of the CALFED agencies; 2) the Ecosystem Roundtable; and 3) CALFED.

Each year, a CALFED agency team will develop a draft set of early implementation projects and programs to be considered for funding. A list of projects recommended for funding will go to the Ecosystem Roundtable, along with CALFED, for review and discussion. The Ecosystem Roundtable is a subcommittee of the FACA² chartered Bay Delta Advisory Council, and was appointed to provide stakeholder input into the process of priority setting and project selection. Its mission is to provide advice on development of an annual integrated planning process for restoration project selection and on integration and coordination with existing State and Federal restoration programs to increase overall restoration effectiveness. The Roundtable will review an annual work plan to be approved by CALFED.

COORDINATION WITH OTHER ONGOING PROGRAMS

It is important to view the proposed budget estimate in context of existing programs which complement the projects and work supported by the Program's budget. For example, work under the auspices of the *Central Valley Project Improvement Act's* (CVPIA) Restoration Fund and the Energy and Water Development appropriations will be in tandem with the ecosystem restoration funds spent through the Program—addressing some of the same needs (such as fish screen improvements and habitat acquisition) as well as other complementary programs (such as supplemental water acquisitions). These programs will not be in competition with each other; rather, through the work of the Ecosystem Roundtable, they will be coordinated to support the same overall ecosystem goals and fund complementary projects and programs (consistent with the specific mitigation and restoration objectives and authorities set forth in the CVPIA).

COORDINATION OF STATE, FEDERAL, AND STAKEHOLDER FUNDING

The following matrix includes program implementation activities and cost estimates proposed for FY 1998. Funding for these early implementation actions will come from several sources. It is anticipated that State, Federal, and stakeholder funding will be required to complete this implementation. While the precise allocation of funding is yet to be defined, some funding mechanisms have been identified.

²Federal Advisory Committee Act

PROPOSED FY 1998 PROGRAM ACTIVITIES AND COST ESTIMATE

| Proposed CALFED Program Budget | Proposed Activities | Potential Federal Funding | Potential State Funding Sources |
|--|---|--|--|
| I. ECOSYSTEM QUALITY | | | |
| Habitat Acquisition and Restoration | | | |
| \$47 million | a. Acquisition of key properties and habitat restoration in partnership with others for fish and wildlife | \$47 million ³ USDA (NRCS) FWS COE NFWF | Prop. 204 (Cat. III) ⁴ |
| \$8 million | b. Refuge and Sacramento and San Joaquin meander belt expansion | \$8 million FWS | Prop. 204 Cat. III, Sac Valley habitat measures, or appropriation to implement SB 1086 program |
| \$7 million | c. Develop or purchase wetlands in the Delta | Cat. III varies ^{5, 6} | Prop. 204 Cat. III |
| \$20 million | d. Delta and tributary modifications for the improvement of the environment (relating to habitat restoration and protection associated with Project and non-Project levees) | | Prop. 204 Cat. III |

³ These estimates were developed by the CALFED Bay-Delta Program and do not reflect or endorse individual agency requests for funding.

⁴ Descriptions in parentheses () refer to article titles in Prop. 204.

⁵ Federal participation of \$20 million for Category III is proposed for FY 1998 (USBR and NMFS) in these categories.

⁶ Potential Category III activity.

Identified Proposition 204 funds are exclusive of the CALFED Bay-Delta Ecosystem Program (Chapter 7), which are tied to completion of the EIR/S on the preferred alternative.

| Proposed CALFED Program Budget | Proposed Activities | Potential Federal Funding | Potential State Funding Sources |
|---------------------------------------|---|----------------------------------|--|
| \$11 million | e. Sacramento River habitat improvement | \$11 million COE | Prop. 204 (Cat. III, Sac Valley habitat measures, or appropriation to implement SB 1086 program) |
| \$8 million | f. Delta island and levee habitat improvements | Cat. III varies \$3 million USGS | Prop. 204 (Cat. III) |
| \$2 million | g. Watershed management for habitat enhancement | \$2 million NRCS EPA | Prop. 204 (Watershed rehabilitation) |
| \$3 million | h. Reconnaissance, feasibility, design, and environmental documentation for habitat restoration and new projects | | Prop. 204 (Cat. III or Sac Valley habitat measures) |
| Fish Screening and Passage | | | |
| \$6 million | i. Fish ladders and/or removal of barriers to improve fish passage at key locations | Cat. III varies | Prop. 204 (Cat. III, CVPIA State match, or Sac Valley habitat measures) |
| \$10 million | j. Improve fish screening throughout the Bay-Delta system to reduce losses of Delta resident and migratory fish species | \$10 million USBR | Prop. 204 (Cat. III, CVPIA State match, or Sac Valley habitat measures) |
| \$1 million | k. Reconnaissance, feasibility, design, and environmental documentation for fish passage/screening projects | Cat. III varies | Prop. 204 (Cat. III or CVPIA State match) |
| \$2 million | l. Program to isolate and/or remove gravel pits and related debris along rivers to improve fish passage | Cat. III varies | |

| Proposed CALFED Program Budget | Proposed Activities | Potential Federal Funding | Potential State Funding Sources |
|---------------------------------------|---|------------------------------|---|
| \$37 million | m. State cost-share of fish and wildlife restoration measures required by Section 3406 of CVPIA | | Prop. 204 (CVPIA State match) |
| Exotic Species Management | | | |
| \$2 million | n. Improve control of exotic species which threaten the recovery and biodiversity of native species | Cat. III varies | Prop. 204 (Cat. III) |
| Monitoring of Ecosystem Health | | | |
| \$3 million | o. Comprehensive monitoring of Bay-Delta ecosystem health and the effectiveness of restoration activities (Adaptive Management) | \$1 million USBR | Prop. 204 Cat. III or IEP funding |
| II. WATER QUALITY | | | |
| \$10 million | a. Conduct watershed management pilot program for water quality improvement | \$10 million EPA USDA (NRCS) | Prop. 204 (Watershed rehabilitation) |
| \$1 million | b. Real time water quality management | | Prop. 204 (Drainage management) |
| \$11 million | c. Pollutant source control to reduce toxic discharges to the ecosystem from point- and non-point sources | \$11 million EPA | Prop. 204 (Drainage management - Sac Valley habitat measures) |
| \$5 million | d. Land conversion and/or other methods to help control water quality from agricultural drainage | | Prop. 204 (Drainage management) |
| \$1 million | e. Pilot program for underground detention of agricultural drainage | | Prop. 204 (Drainage management) |

| Proposed CALFED Program Budget | Proposed Activities | Potential Federal Funding | Potential State Funding Sources |
|---|--|---------------------------|---|
| \$12 million | f. Construct wetlands wastewater treatment for portions of existing discharges to the estuary | | Prop. 204 (Clean water and drainage management) |
| III. LEVEE SYSTEM VULNERABILITY | | | |
| \$12 million | a. Delta levee improvements/habitat restoration and habitat protection | | Prop. 204 (Delta levees) |
| IV. WATER SUPPLY RELIABILITY | | | |
| \$1 million | a. Technical planning and support to water districts for water use efficiency measures | | Prop. 204 (Water supply reliability) |
| \$10 million | b. Financial assistance for water use efficiency measures and groundwater recharge | | Prop. 204 (Conservation) |
| \$7 million | c. Low interest loans/grants for water reclamation | | Prop. 204 (Water recycling) |
| \$3 million | d. Studies, designs, and environmental documentation for projects to increase water supply reliability and opportunities | | Prop. 204 (Water supply reliability) |
| V. ADDITIONAL CATEGORY III CONTRIBUTIONS | | | |
| \$20 million | Additional Federal contribution to Category III activities | \$20 million | |

240

| | | | |
|--------------------------|----------------------|---------------|--|
| \$260 million | TOTAL FY 1998 | \$143 million | |
|--------------------------|----------------------|---------------|--|

FISCAL YEAR 1998 ACTIVITIES

The following sections provide supplemental information for the FY 1998 cost matrix.

I. ECOSYSTEM QUALITY

Habitat Acquisition and Restoration

These activities will fund habitat acquisition and initiate habitat restoration to conserve and enhance natural ecosystem processes throughout the Bay/Delta ecosystem. Three major habitat/restoration concepts are:

- Acquire key habitat from willing sellers to preserve ecosystem values and future opportunities for restoration.
- Initiate restoration and enhancement projects on newly acquired and existing habitat.
- Conduct research, development, monitoring, demonstration, and pilot projects to provide better information to guide and improve future actions.

Effective restoration will provide spawning, nesting, rearing, foraging, brooding and cover habitat, increase food chain productivity, and restore natural hydrologic patterns to enhance natural processes and assist in recovery of species of concern. Habitat restoration is the foundation of the Ecosystem Restoration Program Plan. The activities and actions described below will preserve existing habitat, retain options to restore habitat, and initiate restoration in a manner that will preserve future options for improved, cost-effective restoration through adaptive management. Research, development and demonstration projects are key to long-term restoration success. Acquisition and restoration activities will be coordinated with other State, Federal and private efforts. Without full funding, some opportunities and options may be lost, and recovery of special status species may be delayed.

The Habitat Acquisition and Restoration Program includes eight activities. The first of the eight activities is not targeted to specific practices or regions of the Bay-Delta ecosystem.

I-a. Acquisition of Key Properties and Habitat Restoration in Partnership with Others for Fish and Wildlife

This activity will fund acquisition of existing habitat and restorable lands from willing sellers, new and continuing restoration, development of partnerships, and the design and implementation of demonstration projects. The activity will be designed to maximize opportunities, coordination and effective use of information within the adaptive management program. Without full funding, some opportunities to acquire and restore valuable habitat may be lost.

Total FY 1998 Funding Request: \$47 million to be provided either through a CALFED Bay-Delta Program Trust or distributed to individual agencies: 1) USFWS, 2) USDA, 3) COE, 4) NFWF, 5) USBR, 6) USEPA, and perhaps others. Potential State funding through Proposition 204 (Category III).

Key actions: Would acquire from willing sellers 15,000 to 30,000 acres in fee and/or easements for fisheries, waterfowl and other wildlife habitat and/or initiate restoration and demonstration projects on existing and newly acquired lands. The potential habitats could include expansion of National Wildlife Refuges, freshwater tidal marshes, slough channels on shallow islands, floodplain and meander corridors, floodplain wetlands, shaded river and riparian woodlands, and others as appropriate. These actions could be conducted within the Delta, San Pablo/Suisun Bays, and the Sacramento and San Joaquin watersheds.

I-b. Refuge and Sacramento and San Joaquin Rivers Meander Belt Expansion

This targeted activity will fund acquisition of meander belt habitat through actions such as expansion of the National Wildlife Refuge System within the Bay-Delta watershed. This habitat is needed to ensure viable key habitats within the Bay-Delta system. Without full funding, some opportunities to acquire meander belt habitat may be lost.

Total FY 1998 Funding Request: \$8 million to be provided either through a CALFED Bay-Delta Program Trust or distributed to individual agencies: USFWS and perhaps others. Potential State funding through Proposition 204 (Category III, Sac Valley Habitat Measures) or appropriation to implement SB 1086 Program.

Key actions: Would acquire 2,000 to 6,000 acres of key habitat from willing sellers and/or initiate restoration on existing and newly acquired lands. Some examples of potential habitat acquisition and restoration are:

- Acquire, from willing sellers, land and/or easements within existing meander corridors along the mainstem Sacramento River.
- Expand existing National Wildlife Refuges.
- Initiate studies regarding the feasibility of reconfiguring major Sacramento River bypasses and managing for various habitat types; for example, floodplain wetlands along the Colusa Drain, or spawning and rearing habitat enhancement and establishment of riparian woodlands in the Yolo Bypass.
- Design and implement demonstration projects to restore meander corridors and floodplain wetlands along the Sacramento River.
- Design and implement demonstration projects to restore shaded river habitat and riparian woodland habitat on the mainstem Sacramento River, tributaries and bypasses.

- Design and implement demonstration projects to restore natural channel functions within reaches of the Sacramento River tributaries adversely impacted by gravel mining.
- Study the feasibility of restoring the meander belt of the lower San Joaquin River.

I-c. Develop or Purchase Wetlands in the Delta

This targeted activity will fund acquisition of wetland habitat within the Delta. Without full funding, some opportunities to acquire Delta wetland habitat may be lost.

Total FY 1998 Funding Request: Potential Federal Category III participation varies⁷. Potential State funding through Proposition 204 (Category III).

Key actions: Would acquire 1,000 to 3,000 acres of wetlands from willing sellers and/or initiate restoration on existing and newly acquired lands. Some examples of potential habitat acquisition and restoration are:

- Design and implement demonstration projects restoring freshwater tidal marshes and slough channels on shallow islands, especially in the eastern, central and northwestern Delta, the west shore of the Sacramento River, and the lower San Joaquin River.
- Acquire from willing sellers lands and/or easements and restore floodplain wetlands in the eastside Delta tributary watersheds.
- Acquire from willing sellers lands and/or easements in the western and/or central Delta to preserve opportunities for long-term restoration of freshwater tidal marshes, slough channels and other desirable habitat types.

I-d. Delta and Tributary Modifications for the Improvement of the Environment (relating to Habitat Restoration and Protection Associated with Project and Non-Project Levees)

This targeted activity will restore shallow riparian and shallow water in-Delta habitat along levees. Without full funding, restoration of habitat and recovery of species of concern may be delayed.

Total FY 1998 Funding Request: Potential State funding through Proposition 204 (Category III).

Key actions: 10 to 30 miles of levee-associated habitat will be restored, and associated habitat inland will be protected.

⁷ Federal participation of \$20 million for Category III is proposed for FY 1998 (USBR and NMFS)

I-e. Sacramento River Habitat Improvement

This targeted activity will restore habitat associated with Sacramento River levees. Without full funding, restoration of habitat and recovery of species of concern may be delayed.

Total '98 Funding Request: \$11 million to be provided either through a CALFED Bay-Delta Program Trust or distributed to individual agencies: COE and perhaps others. Potential State funding through Proposition 204 (Category III, Sac Valley Habitat Measures) or appropriation to implement SB 1086 Program.

Key actions: 2 to 5 miles of river levee-associated habitat will be restored when levee repairs are required and/or priority vegetation restoration throughout the levee system will be provided. These could include restoration of habitat, setback levees or other appropriate actions.

I-f. Delta Islands and Levee Improvements

This targeted activity will develop aquatic habitat associated with waterside levee banks on western Delta islands, analysis of subsidence controls and levee seismic evaluations and will include habitat considerations, and dredge materials will be reused to restore aquatic habitats. Without this funding, some opportunities to improve Delta islands and levees, and recovery of species of concern, may be delayed,

Total FY 1998 Funding Request: \$3 million to be provided either through a CALFED Bay-Delta Program Trust or distributed to individual agencies: USGS and perhaps others. Potential Federal Category III participation varies. Potential State funding through Proposition 204 (Category III).

I-g. Watershed Management for Habitat Enhancement

This targeted activity will use watershed management techniques for habitat enhancement, and benefits in control of non-point source pollution will be obtained. Without full funding, recovery of species of concern may be delayed.

Total FY 1998 Funding Request : \$2 million to be provided either through a CALFED Bay-Delta Program Trust or distributed to individual agencies: NCRS, EPA, and perhaps others. Potential State funding through Proposition 204 (Watershed rehabilitation).

I-h. Reconnaissance, Feasibility, Design and Environmental Documentation for Habitat Restoration and New Projects

This targeted activity will provide assistance for evaluation and design of restoration options and for necessary environmental documentation. Without full funding, some delays in implementation of habitat restoration may occur and recovery of species of concern may be delayed.

Total FY 1998 Funding Request: Potential State funding through Proposition 204 (Category III, Sac Valley Habitat Measures).

Fish Screening and Passage

Aquatic life in the Bay-Delta and its tributaries suffers direct mortality by diversion of water into water supply systems, and spawning and other habitat is inaccessible because of structures located in channels and streambeds. This program would modify or remove existing structures to reduce mortality, increase access to spawning habitat, and facilitate fish passage. The initial phase of the program will emphasize research and development, demonstration and pilot projects, and adaptive management to ensure that long-term improvements are as effective and cost-efficient as possible. Fish screening and passage activities will be coordinated with other State, Federal and private efforts.

Without this program, mortality and loss of habitat will continue at levels that could cause continued decline in species of concern or delay their recovery. Fish screening and passage improvements will also increase the effectiveness of habitat acquisition and restoration activities.

I-i. Fish Ladders and/or Removal of Barriers to Improve Fish Passage at Key Locations

This activity will allow key fish species to pass existing barriers and reach new habitat. Without full funding, direct mortality of species of concern and poor access to suitable habitat may continue, and recovery may be delayed.

Total FY 1998 Funding Request: Potential Federal Category III participation varies. Potential State funding through Proposition 204 (Category III, CVPIA State Match, or Sac Valley Habitat Measures).

Key actions: Two to five fish ladders will be built, and/or barriers will be removed where direct mortality or migration delays can be reduced, and previously inaccessible stream channels will be made available for spawning.

I-j. Improve Fish Screening throughout the Bay-Delta System to Reduce Losses of Delta Resident and Migratory Fish Species

This activity will improve or eliminate unscreened or inadequately screened diversions which cause mortality of species of concern. Without full funding, direct mortality of species of concern may continue for a longer period.

Total FY 1998 Funding Request: \$10 million to be provided either through a CALFED Bay-Delta Program Trust or distributed to individual agencies: USBR and perhaps others. Potential State funding through Proposition 204 (Category III, CVPIA State Match, or Sac Valley Habitat Measures).

Key actions: 5 to 10 of the highest priority diversions will be screened, or diversions will be consolidated or relocated to reduce fish losses. Some examples of fish screening projects are:

- Initiate first phase of program to install fish screens on Delta, Sacramento River and San Joaquin River water diversions, and consolidate and/or relocate diversion sites where feasible and effective.
- Design and implement demonstration projects to replace low diversion dams with "fish friendly" facilities, and remove obsolete dams and other obstructions where appropriate on the Sacramento River and its tributaries.

I-k. Reconnaissance, feasibility, design and environmental documentation for fish passage/screening projects

This activity will contribute to necessary studies and design of fish passage and screening projects throughout the Bay-Delta system. Without full funding, passage and screening projects may be delayed, or projects may not be as effective as possible.

Total FY 1998 Funding Request: Potential Federal Category III participation varies. Potential State funding through Proposition 204 (Category III, CVPIA State match).

I-l. Isolate and/or Remove Gravel Pits and Related Debris Along Rivers to Improve Fish Passage

Design and implement demonstration projects to restore natural channel functions within reaches of the San Joaquin River and Sacramento River tributaries adversely affected by gravel mining.

Total FY 1998 Funding Request: Potential Federal Category III participation varies.

I-m. State Cost-Share of Fish and Wildlife Restoration Measures Required by Section 3406 of CVPIA

Proposition 204 authorizes the State of California to provide matching funds for CVPIA authorized improvements to the Bay-Delta ecosystem.

Total FY 1998 Funding Request: Potential State funding through Proposition 204 (CVPIA State match).

Exotic Species Management

Exotic (introduced) species are an important but sometimes undesirable component of the Bay-Delta ecosystem. Introduced species can alter habitat, crowd out native species, and compete with or feed on species of concern. Many undesirable species which have not yet become established in the Bay-Delta have the ability to do so, so exotic species management has an element of protection as well as control. Without full funding, exotic species will continue to limit the recovery of species of concern at unnecessary levels.

I-n. Improve Control of Exotic Species Which Threaten the Recovery and Biodiversity of Native Species

This activity will improve control of exotic species which threaten the recovery of native species, and/or threaten the health of the estuary.

Total FY 1998 Funding Request: Potential Federal Category III participation varies. Potential State funding through Proposition 204 (Category III).

Key actions: Develop a program for exotic species management. Some examples of exotic species management include:

- Control exotic species by initiating and enforcing ballast discharge requirements in the Delta, Suisun Bay and San Pablo Bay.
- Remove invasive introduced vegetation in the Delta.

Monitoring of Ecosystem Health

This program will begin comprehensive monitoring of the Bay-Delta ecosystem and the effectiveness of restoration activities. Monitoring will be coordinated with other State and Federal activities.

I-o. Comprehensive Monitoring of Bay-Delta Ecosystem Health and the Effectiveness of Restoration Activities (Adaptive Management)

This activity will provide the information needed to implement a sound program of adaptive management to expand existing monitoring efforts to focus on indicators of system health not now being evaluated. This activity will provide the data to evaluate our actions taken as part of the FY 1998 efforts.

Total FY 1998 Funding Request: \$1 million to be provided either through a CALFED Bay-Delta Program Trust or distributed to individual agencies: USBR and perhaps others. Potential State funding through Proposition 204 (Category III) or IEP funding.

II. WATER QUALITY

Degraded water quality diminishes the quality of aquatic habitat and can have direct toxic effects on fish and wildlife species. Municipal and industrial users pay substantial costs to reduce undesirable constituents in delivered water supplies, and water quality can affect crops and agricultural production costs. Examples of potential activities include land conversion, implementation of habitat-enhancing farming practices, and improved range management practices. Programs will be designed to encourage participation by willing

landowners and to maximize multiple benefits. Without full funding, improvements in water quality would be delayed, leading to continued negative effects on the aquatic ecosystem, agriculture and urban drinking water costs and quality.

II-a. Conduct a Watershed Management Pilot Program for Water Quality Improvement

This pilot program will be used to determine the long-term watershed management program and its use in improving water quality for all water users. Pilot programs will be established, and information will be used to design future watershed management programs.

Total FY 1998 Funding Request: \$10 million to be provided either through a CALFED Bay-Delta Program Trust or distributed to individual agencies: USDA (NCRS), EPA, and perhaps others. Potential State funding through SWRCB implementation of Proposition 204 (watershed rehabilitation).

Key actions: Approximately 20 percent of high priority watershed management pilot programs will be completed, primarily on undammed tributaries. Watershed management for water quality improvement would include erosion control, wetlands protection and other appropriate actions.

II-b. Real-Time Water Quality Management

This activity will establish real-time water quality management by direct monitoring and response to water quality variables.

Total FY 1998 Funding Request: Potential State funding through Proposition 204 (Drainage management).

II-c. Pollutant Source Control to Reduce Toxic Discharges to the Ecosystem from Point and Non-point Sources

Pollutant source controls form the foundation for the Water Quality Common Program. This activity will target high-priority sources to reduce toxic discharges in the Bay-Delta system and fund appropriate monitoring efforts.

Total FY 1998 Funding Request: \$11 million to be provided either through a CALFED Bay-Delta Program Trust or distributed to individual agencies: EPA and perhaps others. Potential State funding through Proposition 204 (Drainage management).

Key actions: Approximately 10 percent of high priority source control actions will be completed.

II-d. Land Conversion and/or Other Methods to Help Control Water Quality from Agricultural Drainage

Agricultural drainage water often carries undesirable constituents such as dissolved solids, sediments, and agricultural chemicals. This activity will use land conversion and/or other methods to help improve water quality from agricultural drainage.

Total FY 1998 Funding Request: Potential State funding through Proposition 204 (Drainage management).

II-e. Pilot Program for Underground Detention of Agricultural Drainage

This activity will establish a pilot program to determine the feasibility, costs and effectiveness of underground detention of agricultural drainage for water quality improvement.

Total FY 1998 Funding Request : Potential State funding through Proposition 204 (Drainage management).

II-f. Construct Wetlands Wastewater Management Treatment for Portions of Existing Discharges to the Estuary

Wetlands wastewater treatment provides a proven technology to reduce wastewater discharges to improve water quality. This activity will establish a pilot program to reduce the amount of pollutants discharged into the Bay-Delta system from wastewater treatment plants. Results will be used to determine long-term use of wetlands treatment.

Total FY 1998 Funding Request: Potential State funding through Proposition 204 (Clean water and drainage management).

Key actions: A pilot program will be established with the goal of reducing pollutants from approximately 10 to 15 million gallons per day of discharges.

III. LEVEE SYSTEM VULNERABILITY

Poor levee conditions increase the risk of catastrophic levee failure and flooding of Delta islands. Levee conditions have deteriorated over time due to natural and man-caused factors, and the protective value of levees has declined as Delta islands have subsided with oxidation and erosion. Flooding of Delta islands creates risks to human life and economic values associated with island land uses are lost unless and until islands are reclaimed. The costs of reclaiming flooded islands may be prohibitive. Without full funding, the existing level of risk of flooding will continue or increase.

III-a. Delta Levee Improvements/Habitat Restoration and Habitat Protection

This activity will make repairs to high priority levees.

Total FY 1998 Funding Request : Potential State funding through Proposition 204 (Delta levees).

Key actions: Approximately 3 to 6 miles of high priority levee repairs will be completed.

IV. WATER SUPPLY RELIABILITY

The reliability of municipal, industrial and agricultural water supplies from the Bay-Delta is diminished by the natural variability of precipitation and the need for more water for ecosystem restoration. This program will increase water supply reliability by increasing water use efficiency, groundwater recharge and water reclamation. These activities reduce dependence on Bay-Delta supplies, increase reliability, and allow more flexibility for dealing with future water supply needs. Without full funding, water supply reliability will continue to be unnecessarily diminished.

IV-a. Technical Planning and Support to Water Districts for Water Use Efficiency Measures

Technical planning is needed for water districts to improve their water use efficiency. This activity will provide funding and technical expertise in water efficiency analysis and implementation of improvements. Without full funding, water use efficiency improvements may be delayed.

Total FY 1998 Funding Request: Potential State funding through Proposition 204 (Water supply reliability).

IV-b. Financial Assistance for Water Use Efficiency Measures and Groundwater Recharge

Reduced demand by improved efficiency effectively increases supply, and groundwater recharge is an established and cost-effective means of ensuring supplies when surface water supplies are less available. This activity will provide financial incentives for efficiency and recharge improvements. Without full funding, water use efficiency and groundwater recharge measures may be delayed.

Total FY 1998 Funding Request: Potential State funding through Proposition 204 (Conservation).

Key actions: Incentives for continued implementation of existing urban Best Management Practices and agricultural Efficient Water Management Practices will be provided.

IV-c. Low Interest Loans/Grants for Water Reclamation

Reclamation of wastewater is an established and effective source of water supply in California. This activity will provide funding for reclamation of wastewater.

Total FY 1998 Funding Request: Potential State funding through Proposition 204 (Water recycling).

Key actions: Facilities for reuse of 1,000 to 3,000 acre-feet per year will be provided, the extent of reuse depending on the intended use of the reclaimed water.

IV-d. Studies, Designs and Environmental Documentation for Projects to Increase Water Supply Reliability and Opportunities

This activity will provide for design and implementation studies of methods to increase water supply reliability in California. Without full funding, implementation of water supply improvements may be delayed, and water supply reliability will continue to be unnecessarily diminished.

Total FY 1998 Funding Request: Potential State funding through Proposition 204 (Water supply reliability).

ADDITIONAL BACKGROUND ON FY 1998 PROPOSED ECOSYSTEM QUALITY EXPENDITURES

The proposed activities for the FY 1998 budget are based upon the goals, objectives, and targets for the comprehensive ecosystem restoration program included in each of the CALFED long-term alternatives. These were then evaluated to identify proposed activities that would be appropriate for early implementation. Activities for early implementation must:

- be justified independently of the Program by the lead agencies for that project;
- be accompanied by an adequate environmental document, the preparation of which includes consultation with responsible and trustee agencies; and,
- not prejudice the ultimate decision on the Program.

Once the proposed activities were identified, the requested budget was allocated among these to provide the tools to address both factors that cause direct mortality of fish and wildlife such as entrainment in water diversions, and factors which indirectly degrade habitat conditions or natural ecological processes.

The Project Selection Process, explained on pages 17-18, is now well underway to select specific actions within each of the budget categories. We have chronicled the expected geographic distribution of the types of actions in the following maps and will provide additional, project specific information as it becomes available.

Guide to Maps 1 through 6

Maps 1 through 6 show the geographic distribution of some of the actions which could be funded through the requested appropriation for FY 1998. These are some of the high priorities identified to date. Beginning in May, additional grant applications will be solicited through a competitive review process for the state Category III funds from Proposition 204. This process is likely to identify many other high priority projects which should be funded.

It should be noted that many projects will involve acquisition of lands or conservation easements to serve ecosystem needs, flood control improvement and/or water quality goals. The Program will work with landowners to secure voluntary arrangements. Furthermore, the Program will work to make habitat improvements compatible with other existing uses.

NOTE: Maps refer to categories in the matrix on pages 23-26 and the associated text on pages 27-37.

Project Types:

1. Acquisition and restoration of key properties — (See category I-a on page 23)

Actions in this category will be focused on acquisition and/or restoration of seasonal wetlands, freshwater and tidal wetlands and on riparian habitat in areas that are most important for the success of listed species or species at risk. Some examples would include restoration in the lower end of the Yolo Bypass, along the Cosumnes and Mokelumne rivers, at the mouth of the Napa and Petaluma rivers, and along the eastern edge of the Delta.

2. Refuges and Sacramento and San Joaquin meander belts and floodways — (See category I-b on page 23)

Actions in this category will be focused on completion of existing refuges such as the Sacramento River Refuge and the Stone Lakes Refuge and on projects which will purchase easements along the Sacramento River from Keswick to Chico Landing and the San Joaquin River downstream of the Merced River. These types of actions can allow floods to pass and the rivers to meander without damaging adjacent landowners or affecting existing infrastructure such as water diversions and fish screens.

3. Sacramento River Habitat Improvement — (See category I-e on page 24)

Actions in this category can be focused on modifications to the existing Sacramento River flood control project to increase its value for fish and wildlife while also improving its ability to provide for flood control. These could include demonstration habitat restoration projects along existing levees in the Verona to Collinsville reach and demonstration projects in the Colusa to Chico Landing reach of the Sacramento River to evaluate setback levees to provide for riparian habitat and increase flood capacity.

4. Delta levee and habitat improvements — (See category I-f on page 24)

Actions in this category can include demonstration projects to control land subsidence using wetlands, habitat restoration on the water side of levees, and beneficial use of dredge materials to restore wetlands and other actions to improve both levee system integrity and fish and wildlife habitat in the Delta. Some of the areas where these actions would be the highest priority would be on the western Delta islands such as Sherman and Twitchell islands because maintenance of the levees in this area is important for protection of the existing seasonal wetlands on the islands as well as for protection of water quality in the Delta.

5. Watershed management for habitat and water quality — (See category I-g on page 24 and category II-a on page 25)

This map shows the geographic distribution for both the funds listed under I(g) and II(a). Watershed management will be directed both toward lands along tributaries which provide habitat for species such as spring-run and fall-run chinook salmon and steelhead and toward the upper watersheds where pilot projects will be implemented and evaluated to determine if they provide significant benefits to both the communities of the upper watersheds and to the resources downstream. Tributaries which are being identified as high priority include Deer, Battle, Mill, Butte, Clear and Big Chico creeks, and the Mokelumne, Stanislaus, Merced, and Tuolumne rivers.

6. Fish screens and passage — (See category I-i on page 24)

Actions could include projects to reduce entrainment of juvenile fish into diversions and projects to improve passage for adults and juveniles. Fish screening and passage projects which have received funding for project design through Category III funds in 1996 and are expected to begin construction in 1997 or 1998 include the Adams, Gorrill, and Durham-Mutual projects on Butte Creek, the Banta Carbona project on the San Joaquin River, RD 108 and RD 1004 on the Sacramento River, and the Suisun Resource Conservation District diversions in Suisun Marsh. In addition, technical experts have identified more than 20 additional passage and screening projects which would be high priority such as Patterson Water District, El Solyo and West Stanislaus diversion on the San Joaquin River.

7. Monitoring — (See category I-o on page 25)

These actions will be occurring basin-wide as monitoring and assessment of projects and responses of fish and wildlife populations to those projects is evaluated. This information can be used to improve restoration projects in future years by evaluating how well today's efforts work.

8. Pollutant source control to reduce toxic discharges to the ecosystem from point and non-point sources. (See category II-c on page 25)

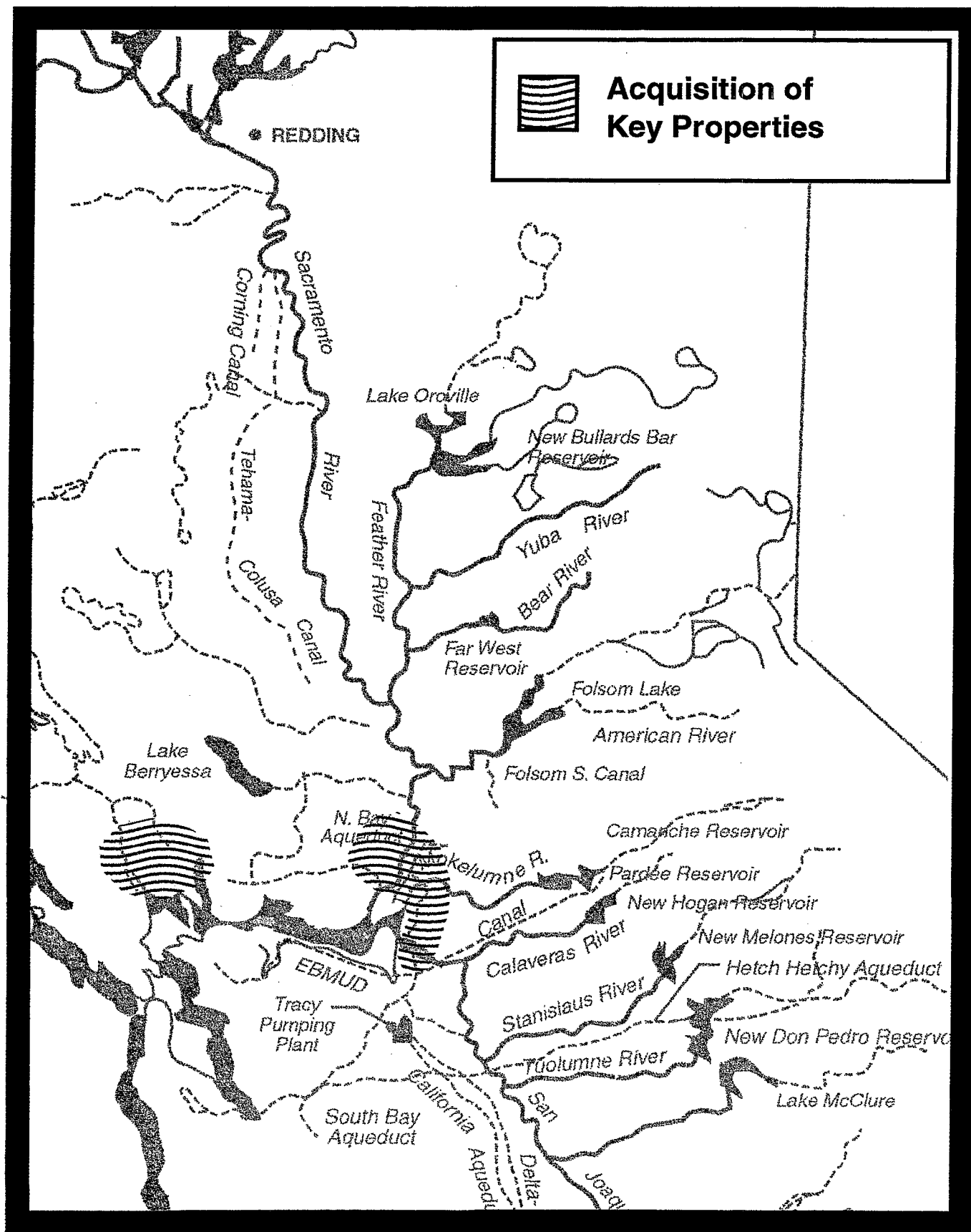
These actions will be occurring basin-wide and will be integrated with existing efforts to control water quality problems that are adversely affecting fish and wildlife. Some examples could include acid mine drainage from Iron Mountain Mine, urban runoff from cities such as Stockton and Sacramento, and agricultural runoff basin-wide.

9. Federal contribution to Category III — (See footnote 5 on page 23 and category V on page 26)

These actions will be occurring basin-wide and actions can address a variety of problems not addressed above such as illegal harvest and over-harvest of fisheries, control of introduced species, and source control of toxics, as well as other actions such as fish screens and habitat restoration discussed above.

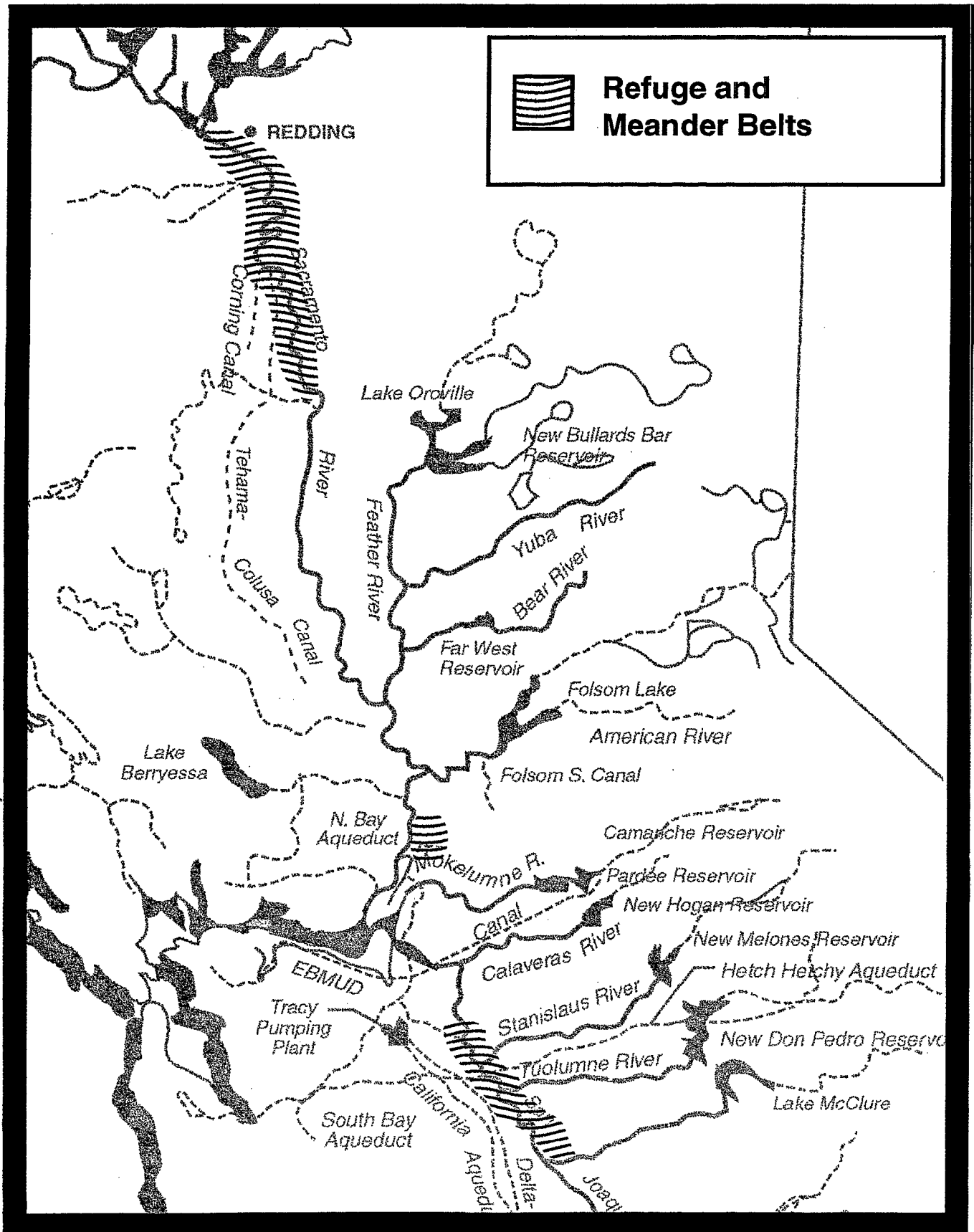
Proposed FY 1998 Program Activities

Map 1: Acquisition/Restoration of Key Properties



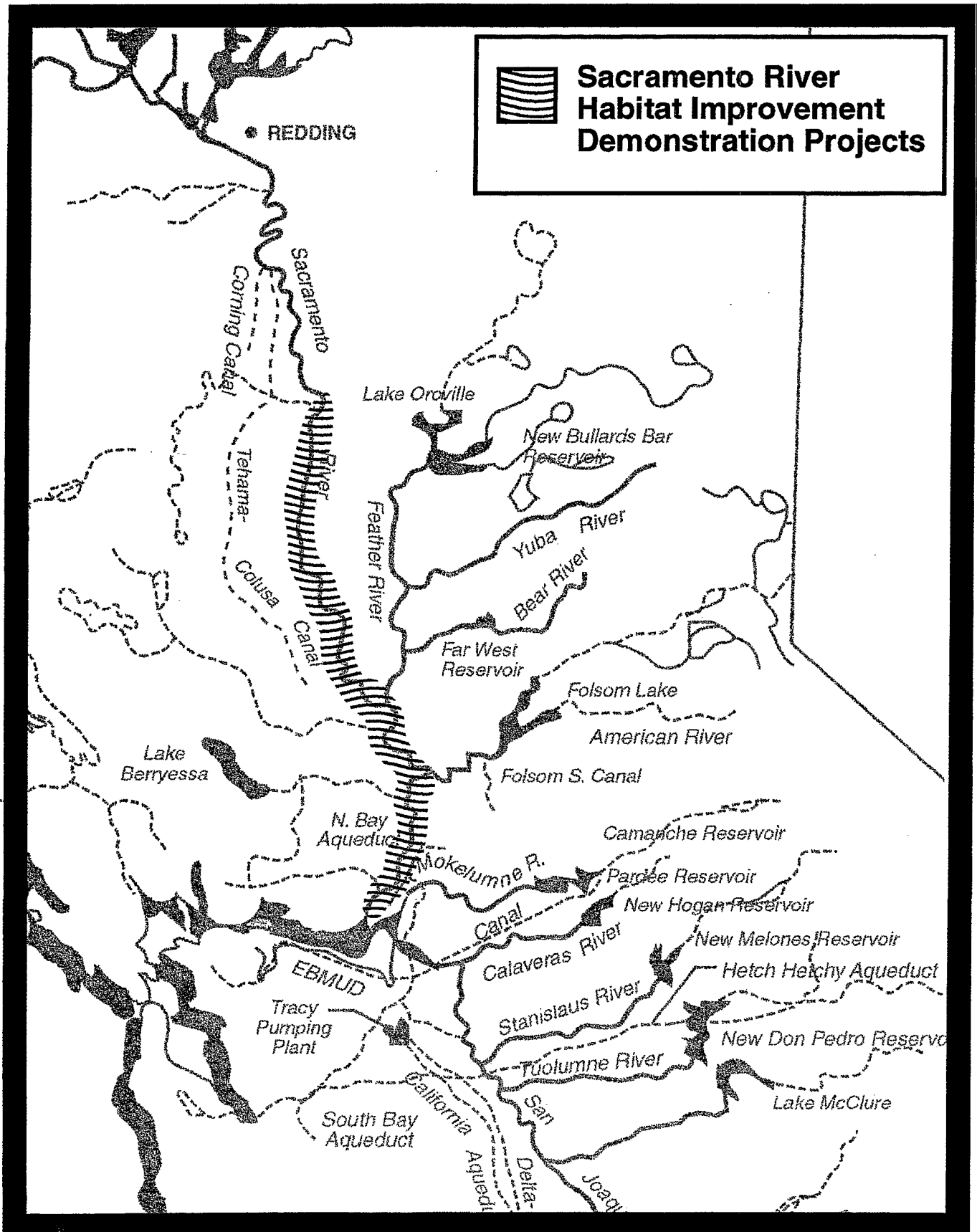
Proposed FY 1998 Program Activities

Map 2: Refuges and Meander Belts



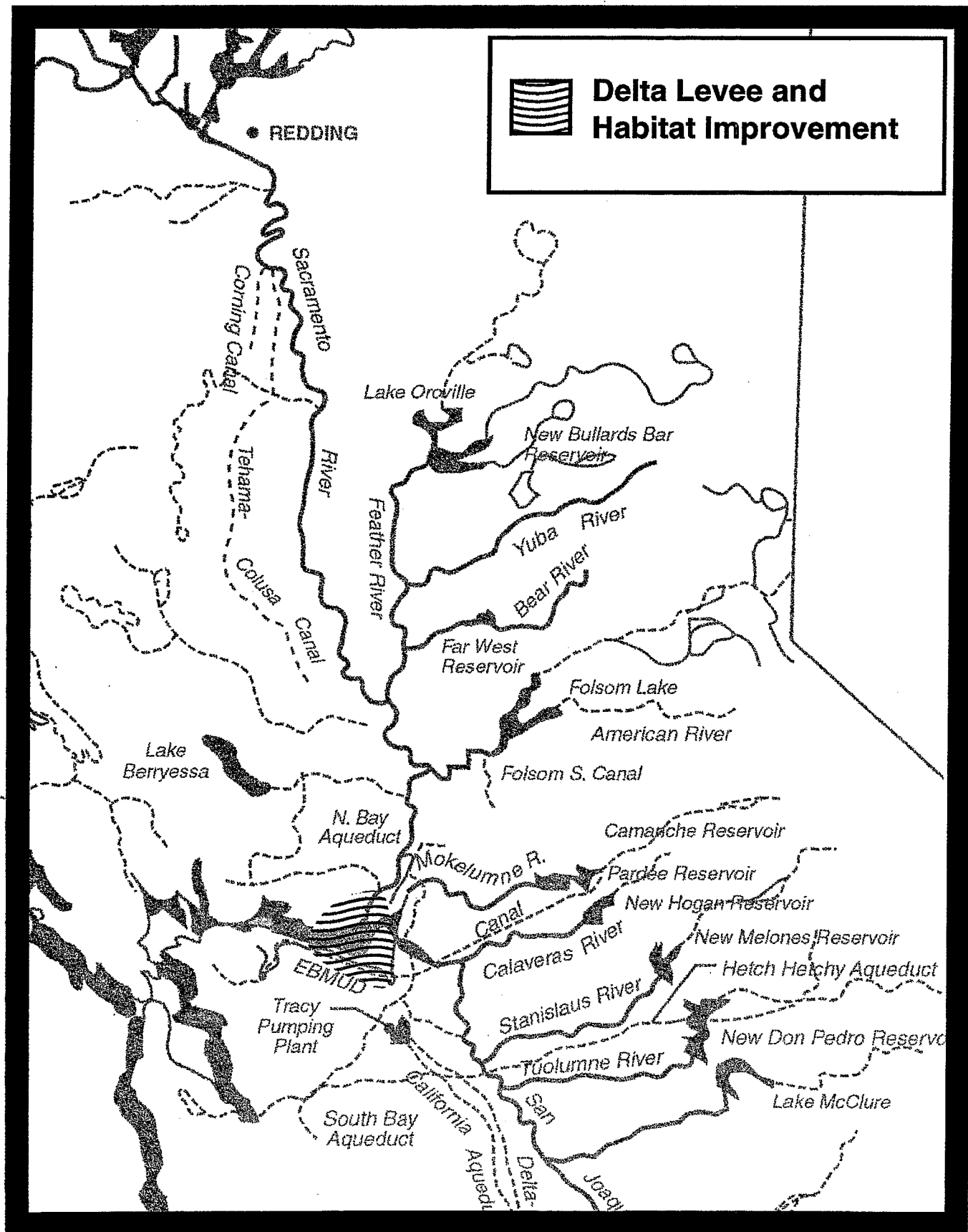
Proposed FY 1998 Program Activities

Map 3: Sacramento River Habitat Improvement

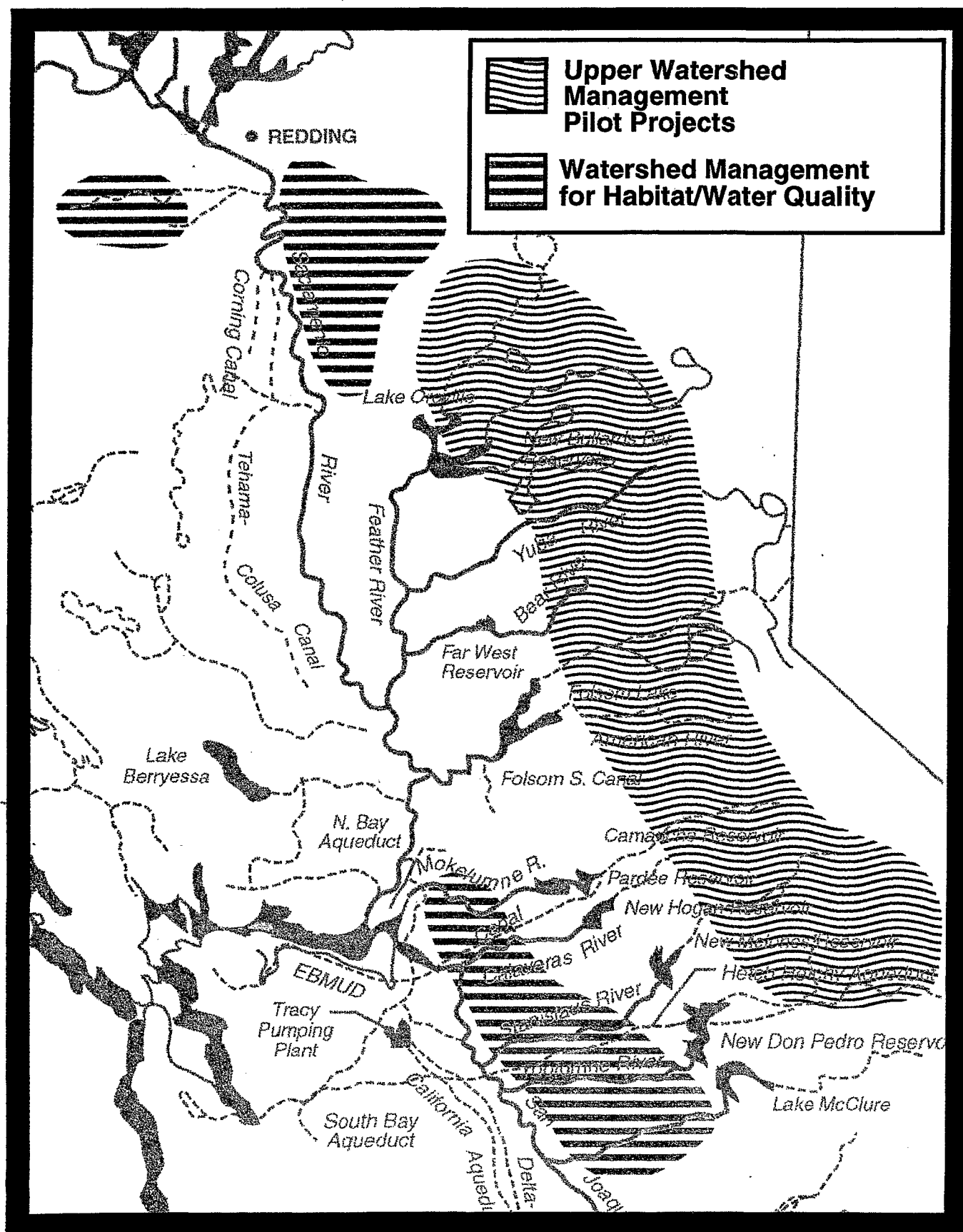


Proposed FY 1998 Program Activities

Map 4: Delta Levee and Habitat Improvement

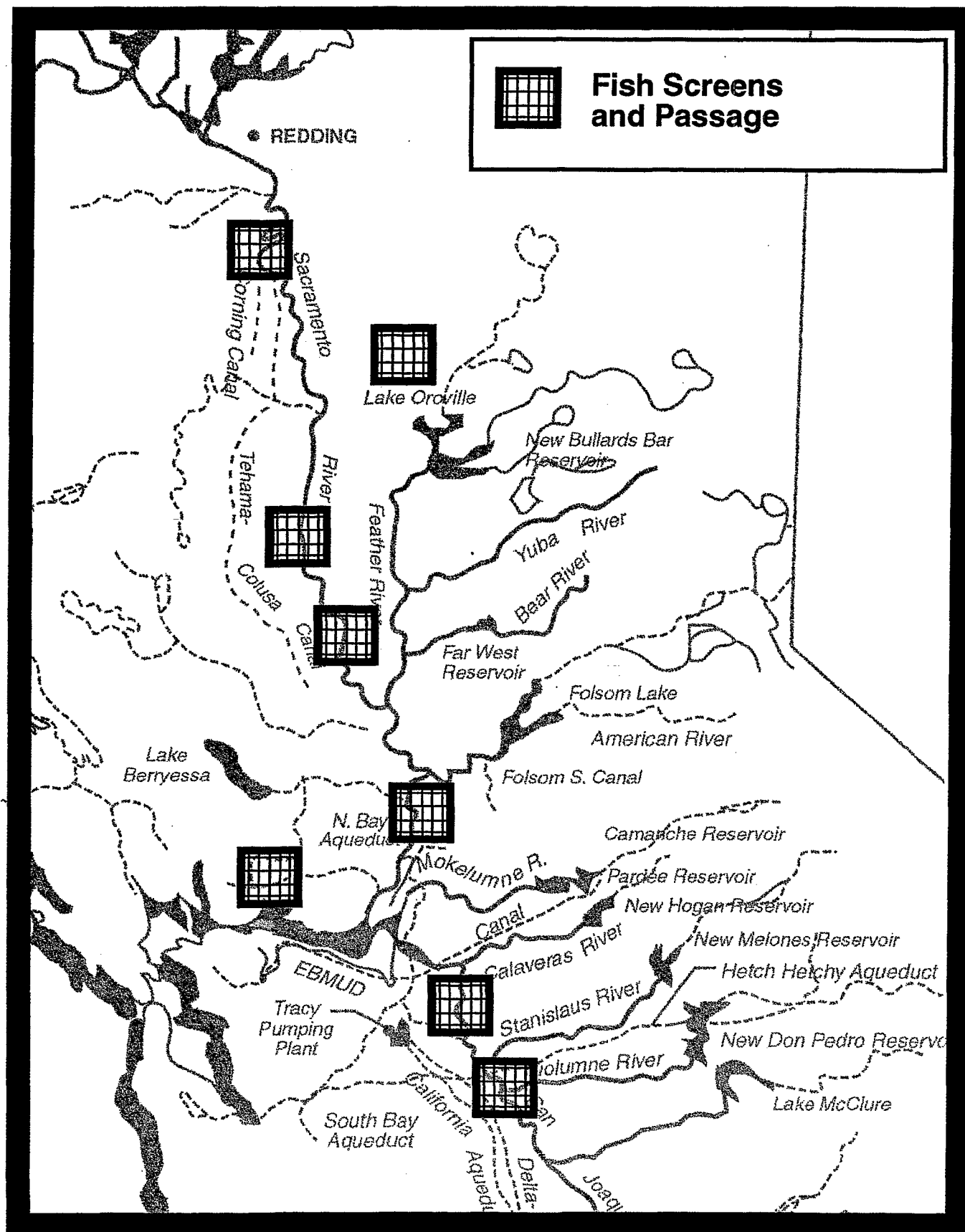


Map 5: Watershed Management



Proposed FY 1998 Program Activities

Map 6: Fish Screens and Passage



Appendix A

OVERVIEW: PROPOSED FIVE-YEAR PROGRAM ACTIVITIES AND COST ESTIMATE

The CALFED Bay-Delta Program has prepared estimates of activities and costs to begin early implementation of the Program. This paper provides an overview of the proposed five-year program and serves as an introduction to the following cost matrix.

INTRODUCTION

The CALFED Bay-Delta Program is developing a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta system. This program is critical to the future of California because the Bay-Delta system is the largest estuary on the West Coast, providing habitat for 120 fish and wildlife species, including many listed as threatened or endangered. The Bay-Delta system is also critical to California's economy, providing drinking water for two-thirds of Californians and irrigation water for 200 crops, including 45 percent of the nation's produce.

The CALFED Bay-Delta Program is preparing a Programmatic EIR/EIS and is scheduled to select a final preferred alternative in Fall 1998. This preferred alternative must address Bay-Delta problems in ecosystem quality, water quality, levee system vulnerability, and water supply reliability. The solution to these problems will require an intensive program costing billions of dollars with implementation extending over several decades. It will require funding from State, Federal, and stakeholder sources and close coordination with other ongoing programs.

PROPOSED FIVE-YEAR PROGRAM

The Program is currently evaluating three potential alternatives. Estimated capital costs generally fall in the \$4 billion to \$8 billion range, and implementation of the preferred alternative may take 20 to 30 years. Given this length of time, it is important to begin implementation as soon as practical. Taking action now on ready projects lessens the time frame for implementation and early results will build support and commitment for implementing the full alternative.

Stakeholder funding has totaled almost \$22 million to date, and \$10 million or more in additional funding is expected in 1997. State funding from Proposition 204 (*passed by voters on November 5, 1996*) includes \$60 million for Category III; \$93 million as cost share for the Central Valley Improvement Act; \$390 million available for habitat restoration once the preferred alternative is selected, the EIR/S is certified and a formal State/Federal cost-share agreement has been implemented; and additional funding for watershed management, water quality improvements, and levee improvements. Federal

funding authorized through the California Bay-Delta Environmental Enhancement and Water Security Act (HR4126) is designed to match State funding through Proposition 204 and stakeholder funding.

Each of these alternatives includes an array of specific actions which will provide a comprehensive solution to the Bay-Delta issues of ecosystem quality, water quality, levee system vulnerability, and water supply reliability. The differences between the alternatives lie mainly in the method of transporting water through and around the Delta, and the amount of additional storage which would complete each alternative.

While the details of the preferred alternative will not be finalized until Fall 1998, the proposed five year program concentrates on activities that will be beneficial to the long-term program regardless of which alternative is ultimately chosen. The five year program includes only activities that are included in each of the three alternatives and also provide early implementation benefits. This implementation will also provide valuable information for use in adaptively managing the system in later years of the program.

The following cost matrix includes potential funding levels and potential funding agencies which are based solely on CALFED staff's judgement. The cost matrix includes activities listed specifically to improve ecosystem quality, water quality, levee system vulnerability, and water supply reliability. However, many of the activities will produce multiple benefits across these four areas. The costs were developed for specific actions, but more detailed studies in later phases of the Program may shift money between actions with similar results. For instance, these studies may indicate that the Program's water quality objectives can be met more effectively by adjusting the balance between land conversion for water quality improvement and levels of wetlands treatment.

The following sections summarize the proposed five-year funding for each of the four problem areas.

Ecosystem Quality - One guiding assumption of the Program is that a comprehensive program of ecosystem restoration, which combines physical habitat improvements with enhanced flows, will result in fewer constraints on the operation of water supply systems. All alternatives being considered include an Ecosystem Common Program that will guide the ecosystem restoration efforts. Efforts are currently underway to implement consensus elements of the Ecosystem Common Program to meet a number of pressing needs. These include:

- The need to increase public confidence in the assumption that comprehensive habitat restoration will provide the anticipated benefits to both the ecosystem and to water supply interests through demonstrated success stories,
- The need to make key land acquisitions to protect ecological functions such as connectivity and critical patch sizes for restoration sites in the face of rising land values and increased competition for land,
- The need to address sources of direct mortality to safeguard species that are already listed such as the Sacramento River winter-run salmon or species being considered for listing such as the spring-run salmon and the steelhead trout, and

- The need to begin the process of adaptive management so benefits can be generated and adjusted as needed for the ecosystem and for water supply interests.

The five-year program to fund ecosystem restoration activities in the Sacramento-San Joaquin Delta watershed is based on the Ecosystem Common Program. This program addresses the ecosystem quality goal which is to "improve and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta to support sustainable populations of diverse and valuable plant and animal species."

The five-year program is designed to place emphasis on restoration of habitat functions, reduction in sources of mortality, control impacts due to exotic species and toxics, all accompanied by monitoring programs to support adaptive management.

The major portion of the ecosystem program funding directly addresses restoration of habitat functions through land acquisition and habitat restoration. This effort is the key to the Ecosystem Common Program and is the largest component in the five-year program. In this early implementation phase, land acquisition is especially crucial. As the California economy continues to expand, land prices are beginning to rise and key parcels that are needed to maintain habitat connectivity and to augment existing conservation areas may not be available in the future. Habitat acquisition and development activities include:

- Development of habitat on existing levees along the Sacramento River and in the Delta,
- Land acquisition to restore the Sacramento River meander and recreate natural functions,
- Expansion of existing habitat areas through acquisition, and
- Habitat restoration activities that also benefit other CALFED objectives.

The activities to directly reduce sources of mortality are focussed on preventing direct losses for species most at risk including San Joaquin salmon, spring-run and winter-run salmon, and steelhead trout by preventing entrainment at water diversions and improving passage at key locations. These types of activities are vital to the restoration of anadromous salmonids but do not provide the broad ecosystem benefits that habitat restoration efforts offers.

The remaining funds in the five-year ecosystem program addresses introduced species and provides information needed for adaptive management. The activities to control impacts from exotic species are designed to both reduce introductions and to control impacts due to species already present in the system. These activities include isolation of riverine habitat from old gravel pits in the San Joaquin system to decrease predation by introduced warmwater species and a program to control introduced species in the Delta. The activities to control impacts due to toxics are included under the following water quality section. To gather the information needed to begin adaptive management, the five-year ecosystem program provides funding to monitor the ecosystem to determine how it is changing.

Water Quality - The five-year program to fund water quality activities in the Sacramento-San Joaquin Delta watershed is based on the Water Quality Common Program. This program addresses the water quality goal which is to "provide good water quality for all beneficial uses."

The five-year program is designed to place emphasis on controlling pollutants at their sources so that less pollutants enter the Bay-Delta estuary. These source controls include:

- Pilot programs in watershed management,
- Actions to better control agricultural drainage,
- Pilot program for underground detention of drainage water,
- Other pollutant source controls such as mine drainage control/treatment to reduce toxics discharges, and
- Wetlands wastewater treatment.

These and additional pollutant source control and treatment may ultimately be supplemented by flow related changes in the system. Real-time monitoring of water quality is an important element of water quality management in the five-year program.

Levee System Vulnerability - The five-year program to fund levee system vulnerability activities in the Delta is based on the Levee System Integrity Common Program. This program addresses the system vulnerability goal which is to "reduce the risk to land use and associated economic activities, water supply, infrastructure, and the ecosystem from catastrophic breaching of Delta levees." Failure of Delta levees can result either from catastrophic events such as earthquakes and floods, or from gradual deterioration. Subsidence of the Delta island peat soils and settling of levee foundations places additional pressure on levees and increases the risk of failure. A portion of the proposed funding for ecosystem quality is also directly related to levee improvements and subsidence control.

Water Supply Reliability - The five-year program to fund water supply reliability activities in the Sacramento-San Joaquin Delta watershed is based on the water supply reliability goal to "reduce the mismatch between Bay-Delta water supplies and current and project."

The five-year program is designed to provide incentives for water users to implement projects and programs. The majority of the water supply reliability funds would go to low interest loans and grants for water use efficiency measures, groundwater recharge, and for water reclamation. Early implementation of these will contribute to long-term water supply reliability.

The three alternatives under investigation in the Programmatic EIR/EIS include a range of potential projects in the water supply reliability area that require much longer lead times than the above projects. Each of the alternatives includes evaluation of storage and conveyance options that may take 10 to 15 years or longer to complete if selected in the preferred alternative. However, planning for these projects must begin much earlier.

Therefore, the five-year program includes funds for site specific studies, designs, and environmental documentation for projects to increase water supply reliability and opportunities designed to implement the selected alternative.

COORDINATION WITH OTHER ONGOING PROGRAMS

It is important to view the proposed budget estimate in context of existing programs which complement the projects and work supported by the Program's budget. For example, work under the auspices of the *Central Valley Project Improvement Act's (CVPIA)* Restoration Fund and the Energy and Water Development appropriations will be in tandem with the ecosystem restoration funds spent through the Program—addressing some of the same needs (such as fish screen improvements and habitat acquisition) as well as other complementary programs (such as supplemental water acquisitions). These programs will not be in competition with each other; rather, through the work of the Ecosystem Round table, they will be coordinated to support the same overall ecosystem goals and fund complementary projects and programs (consistent with the specific mitigation and restoration objectives and authorities set forth in the CVPIA).

COORDINATION OF STATE, FEDERAL, AND STAKEHOLDER FUNDING

The following matrix includes program implementation activities and cost estimates proposed for the first five years of program implementation. Funding for these early implementation actions will come from several sources. It is anticipated that State, Federal, and stakeholder funding will be required to complete this implementation.

**Proposed Five-Year Program
Activities and Cost Estimate (in \$ millions)**

| | | Estimated Cost (\$Million) | | | | | |
|--|--|-----------------------------------|----------------|----------------|----------------|----------------|--------------|
| | | FY 1998 | FY 1999 | FY 2000 | FY 2001 | FY 2002 | TOTAL |
| ECOSYSTEM QUALITY | | | | | | | |
| Habitat Acquisition and Restoration | | | | | | | |
| | Acquisition of key properties and habitat restoration in partnership with others for fish and wildlife | 47 | 18 | 12 | 8 | 8 | 93 |
| | Refuge and Sacramento and San Joaquin meander belt expansion | 8 | 10 | 11 | | | 29 |
| | Develop or purchase wetlands in the Delta | 7 | 12 | 10 | 8 | 8 | 45 |
| | Delta and tributary levee modifications for the improvement of the environment (relating to habitat restoration and protection associated with Project and non-Project levees) | 20 | 30 | 30 | 15 | 15 | 110 |
| | Sacramento River habitat improvement | 11 | 12 | 10 | | | 33 |
| | Delta island and levee habitat improvements | 8 | 13 | 12 | 10 | 9 | 52 |
| | Watershed management for habitat enhancement | 2 | 6 | 4 | 10 | 8 | 30 |
| | Reconnaissance, feasibility, design, and environmental documentation for habitat restoration and new projects | 3 | 4 | 6 | 5 | 3 | 21 |
| Fish Screening and Passage | | | | | | | |
| | Fish ladders and/or removal of barriers to improve fish passage at key locations | 6 | 5 | 6 | 2 | 2 | 21 |
| | Improve fish screening throughout the Bay-Delta system to reduce fish losses of Delta resident and migratory fish species | 10 | 12 | 23 | 26 | 24 | 95 |
| | Reconnaissance, feasibility, design, and environmental documentation for fish passage/screening projects | 1 | 2 | 2 | 2 | 2 | 9 |
| | Program to isolate and/or remove gravel pits and related debris along rivers to improve fish passage | 2 | 4 | 2 | 2 | 2 | 12 |
| | State cost-share of fish and wildlife restoration measures required by Section 3406 of CVPIA | 37 | 9 | 11 | 15 | 21 | 93 |

**Proposed Five-Year Program
Activities and Cost Estimate (in \$ millions)**

| | | Estimated Cost (\$Million) | | | | | |
|--|--|----------------------------|---------|---------|---------|---------|-------|
| | | FY 1998 | FY 1999 | FY 2000 | FY 2001 | FY 2002 | TOTAL |
| | Exotic Species Management | | | | | | |
| | Improve control of exotic species which threaten the recovery and biodiversity of native species | 2 | 2 | 2 | 2 | 2 | 10 |
| | Monitoring of Ecosystem Health | | | | | | |
| | Comprehensive monitoring of Bay-Delta ecosystem health and the effectiveness of restoration activities (Adaptive Management) | 3 | 3 | 3 | 3 | 3 | 15 |
| | WATER QUALITY | | | | | | |
| | Conduct watershed management pilot program for water quality improvement | 10 | 10 | 10 | 12 | 13 | 55 |
| | Real time water quality management | 1 | 1 | 1 | 1 | 1 | 5 |
| | Pollutant source control to reduce toxics discharge to the ecosystem from point- and non-point sources | 11 | 25 | 25 | 15 | 14 | 90 |
| | Land conversion and/or other methods to help control water quality from agricultural drainage | 5 | 5 | 5 | 10 | 10 | 35 |
| | Pilot program for underground detention of agricultural drainage | 1 | 1 | 1 | | | 3 |
| | Construct wetlands wastewater treatment for portions of existing discharges to the Estuary | 12 | 13 | 10 | 5 | 5 | 45 |
| | LEEVE SYSTEM VULNERABILITY | | | | | | |
| | Delta levee improvements/habitat restoration and habitat protection | 12 | 13 | 15 | 16 | 17 | 73 |

**Proposed Five-Year Program
Activities and Cost Estimate (in \$ millions)**

| | | Estimated Cost (\$Million) | | | | | |
|--|---|-----------------------------------|----------------|----------------|----------------|----------------|--------------|
| | | FY 1998 | FY 1999 | FY 2000 | FY 2001 | FY 2002 | TOTAL |
| WATER SUPPLY RELIABILITY | | | | | | | |
| | Technical planning and support to water districts for water use efficiency measures | 1 | 1 | 1 | 1 | 1 | 5 |
| | Financial assistance for water use efficiency measures and groundwater recharge | 10 | 10 | 16 | 14 | 10 | 60 |
| | Low interest loans/grants for water reclamation | 7 | 13 | 12 | 12 | 10 | 54 |
| | Studies, designs, and environmental documentation for projects to increase water supply reliability and opportunities | 3 | 6 | 10 | 16 | 12 | 47 |
| | | | | | | | |
| | | | | | | | |
| | Total | 240 | 240 | 250 | 210 | 200 | 1140 |
| Note: The FY 1998 Cost Estimate includes \$143 million from the President's budget. | | | | | | | |

Appendix B

CALFED BAY-DELTA PROGRAM BACKGROUND

History

The CALFED Bay-Delta Program started in June 1995 as a collaborative effort to address a declining ecosystem, uncertain water supplies, imperiled water quality, and unstable levees in California's Bay-Delta, the region where the San Francisco Bay meets the Sacramento/San Joaquin River Delta.

This 738,000-acre area of channels, sloughs, and islands is a critical habitat for 120 fish and wildlife species. It also serves as the hub of California's water distribution system, supplying drinking water to over 22 million people in northern, central, and southern California and irrigation water to over 4 million acres of farmland.

Critical to California's economy and ecology, the Bay-Delta has been the focus of competing interests virtually since the Gold Rush. And it has suffered from this. Habitats are declining, and several native species are endangered. The system no longer serves as a reliable source of high-quality water, and the levees face an unacceptably high risk of breaching.

Impetus to solve these problems came in 1992 with California Governor Pete Wilson's water policy speech and the formation of the Water Policy Council, which brought together several state agencies with management and regulatory responsibilities in the Bay-Delta. In September 1993, the

Federal Ecosystem Directorate was created to coordinate related federal activities in the region.

In June 1994, the Water Policy Council and the Federal Ecosystem Directorate joined to become CALFED. By the end of that year, CALFED, in cooperation with diverse interest groups, had drafted interim Bay-Delta water quality standards and created a state/federal work group to coordinate operations of the State Water Project and the Federal Central Valley Project.

In June 1995, CALFED launched the CALFED Bay-Delta Program to develop a long-term, comprehensive solution to Bay-Delta problems.

The management efforts of the CALFED Bay-Delta Program have included close cooperation not only among state and federal agencies, but involvement of urban and agricultural water users, fishing interests, environmental organizations, business and others. Such non-governmental groups play a critical role in the collaborative process of developing solutions to Bay-Delta problems.

Approach

The CALFED Bay-Delta Program designed a three-phase approach to identify problems, propose solutions, analyze environmental implications, and devise a long-range plan to protect and enhance the Bay-Delta system.

Phase I

During this phase, the Program developed a clear definition of the problems and issues associated with the Bay-Delta, and identified three solution alternatives.

Phase I concluded in September 1996. It involved a collaborative process to consider all reasonable options for addressing Bay-Delta problems related to fish and wildlife, water supply, water quality, and levee and channel vulnerability. The process was aided by a significant amount of public participation.

Phase II

In this phase, the Program will conduct a broad environmental review of the three alternatives identified in Phase I to

explore their various potential impacts. The full implications associated with each alternative will be considered, including feasibility, cost and benefits. Phase II will produce a programmatic Environmental Impact Statement/Environmental Impact Report (EIS/EIR) in compliance with National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). The EIS/EIR will focus on the broad policy and resource allocation decisions required to implement a program. The primary purpose of this document will be to inform decision-makers about the inter-related and cumulative consequences of the alternatives, and to recommend a program alternative for implementation.

Phase III

During this final phase, the Program will prepare project-specific environmental documents for each element of the selected alternative. The strategies analyzed during Phase III could be operational, structural, regulatory and/or legislative in nature. Final approval of the environmental documents paves the way for implementation. The permit approvals process will also begin in Phase III.



Bay-Delta Problems

The problems facing the Bay-Delta are complex and offer a challenge to government, business and citizens to protect resources of the system while meeting the needs we place upon it.

The problems in the Bay-Delta are grouped into four, intrinsically linked areas:

- Ecosystem quality
- Water supply
- Water quality
- System vulnerability

Problem Area: Ecosystem Quality

The Bay-Delta system no longer provides the habitat necessary to support healthy populations of plants and animals. The decrease in habitat can be traced back as early as the 1800s when the conversion of Delta marshland began. Since the 1850s, 700,000 acres of overflow and seasonally inundated land in the Delta have been converted for agricultural or urban use. Hydraulic mining techniques also contributed to habitat loss and decline. Because mining sediments filled channels and increased flooding, levees were constructed for flood control purposes. Levees eliminated important shallow water habitat for fish, while dredging operations conducted to build

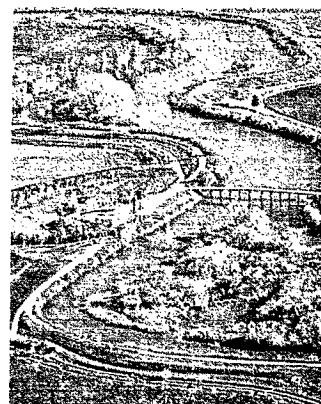
levees eliminated natural habitat along river channels.

The quantity and timing of water flow into the Bay-Delta are important aspects of ecosystem functions, and they have been altered significantly, particularly since the 1960s. Pollutants and introduced species have also contributed to decline in ecosystem health.

The primary program objective for ecosystem quality is to improve and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta system to support sustainable populations of diverse and valuable plant and animal species.

Problem Area: Water Supply

The Bay-Delta system provides the water supply for a wide range of uses. As water use and competition among uses has increased during the past several decades, conflicts have increased among users of Delta water. In addition, water flow and timing requirements have been established to protect certain fish and wildlife species with critical life stages dependent on freshwater flows. These requirements have reduced operational flexibility to meet water demands.



Decreased water supply reliability increases economic uncertainty in the service areas and intensifies conflict over allocation of supplies.

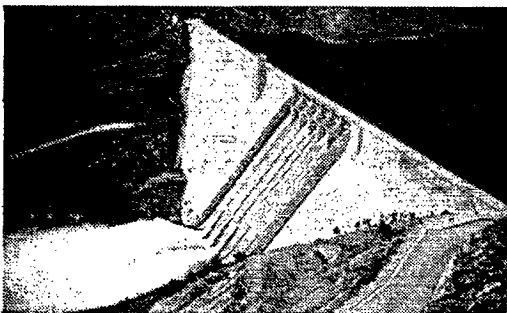
The question of water availability has created economic uncertainty in the water services areas and increased potential conflict over supplies.

The primary objective for water supply reliability is to reduce the mismatch between Bay-Delta water supplies and current and projected beneficial uses dependent on the Bay-Delta system. This can be accomplished by reducing the conflict among beneficial water uses, improving the ability to transport water through the Bay-Delta system and reducing the uncertainty of Bay-Delta water supplies.

Problem Area: Water Quality

The Bay-Delta system provides water for drinking, agricultural irrigation and to support aquatic and wetland habitat. The quality of water in the system is critically important. Pollution enters the Bay-Delta through a number of sources, including sewage treatment and industrial facilities, forests and farm fields, mines, residential landscaping, urban streets and natural sources, including organics and ocean silt. Natural organics from soil erosion and plant decay are a concern because they react with chemicals used in water treatment, creating byproducts that may be harmful to humans. High salt concentrations impact the use of Delta waters for agriculture and drinking water, and can affect the delicate balance of the ecosystem.

The objective of the Bay-Delta Program for water quality is to provide good quality water for all beneficial uses, including drinking water, agriculture, industrial and recreational use and environmental needs.



Problem Area: System Vulnerability

Much of the recent flooding in Northern California resulted from levee failures. These tragic events highlight the need for continued and improved coordination among state and federal agencies, as well as continued investment in maintenance improvements.

There is a growing concern that Delta levees are vulnerable to failure, especially during earthquakes or periods of high runoff. Failure of Delta levees can result in flooding of Delta island farmland and wildlife habitat. Levee failure on key Delta islands would draw salty water up into the Delta, as water rushed to fill the breached island. Such a failure could result in a long interruption of water supply for in-Delta and export use by both urban and agricultural users, until the salt water could be flushed from the Delta.

In addition, local reclamation districts are concerned with the cost of maintaining and improving the levee and channel system. The complex array of agencies with planning, regulatory and/or permitting authorities over levees makes rehabilitation and maintenance efforts difficult.

The primary program objective for addressing Bay-Delta system vulnerability is to reduce the risk to land use and associated economic activities, water supply, infrastructure and the ecosystem from catastrophic breaching of Delta levees. The vulnerability of the levee system to both general failure and sudden catastrophic failure can be reduced by implementing an integrated and comprehensive program for maintenance and rehabilitation of Delta levees and channels.



Program Scope

Geographic Scope

The Bay-Delta Program uses a two-level geographic scope. This approach focuses on the Bay-Delta system in defining problems, yet expands the focus to a broader area for generating solutions.

Problem Scope

Specifically, the geographic problem scope is the legally defined Delta, Suisun Bay (extending to Carquinez Strait) and Suisun Marsh. The Program addresses problems that exist within these boundaries or are closely linked to this area, and related to water management and beneficial economic and environmental use of water.

Solution Scope

The scope of possible solutions to these problems includes any action that can be implemented or influenced by the CALFED agencies, regardless of whether its implementation takes place within the

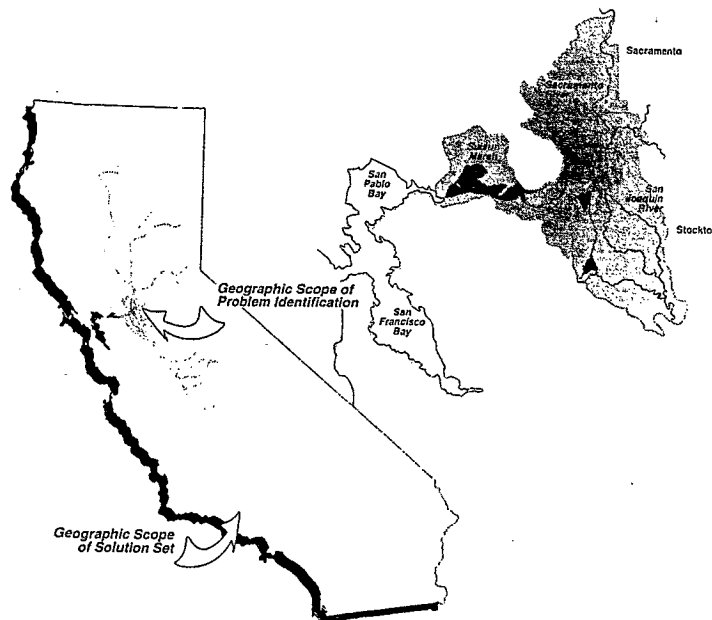
specified problem area. Thus, the scope for solutions would expand to include at least the Central Valley Watershed, the Southern California water system and the Pacific Ocean.

Solution Priorities

The CALFED Bay-Delta Program cannot fully solve every problem that falls within its range of consideration. Therefore, the Program will give highest priority to solving acute problems of broad concern that are closely related to the Bay-Delta system or as an element in a larger water and biological resource system. In addition, the problems must be implementable by the Program or the CALFED agencies. Other problems will receive lower priority.

Integration with Other Processes

The CALFED Bay-Delta Program is not operating in isolation. Many other programs already exist to address some of the problems and solutions being explored by the Program, particularly in upstream areas. The CALFED Bay-Delta Program will provide a framework to coordinate new and existing programs to achieve a comprehensive and lasting solution.



Public Participation

CALFED recognizes that realistic, workable and lasting solutions to the Bay-Delta crisis must reflect input from all stakeholders and the general public. Consequently, the Bay-Delta Program uses several mechanisms to ensure significant public participation and guidance. The public will have a central role in the development of long-term solutions, with opportunities to offer input through a formal citizen advisory council, workshops and other measures.

BDAC

In early 1995, CALFED established the Bay-Delta Advisory Council (BDAC) to help guide the CALFED Bay-Delta Program in development of its long-range plan. BDAC has been chartered under the Federal Advisory Committee Act. Council members were jointly selected by the Secretaries of the U.S. Department of the Interior and the California Resources Agency, and include representatives of the agricultural, environmental and business communities. BDAC assures broad public participation, comments on environmental reports and advises on proposed solutions. The Council meets regularly and is expected to do so until the CEQA/NEPA environmental documentation process is complete.

Public Workshops

Public participation is also solicited through public workshops that involve all water interests in the process, from policy experts to farmers and small business owners, from environmental advocates to Delta residents. Through the workshops, stakeholders have an opportunity to work cooperatively toward a long-term solution to managing the Bay-Delta. The workshops to date have focused on defining problems and assembling and refining solution alternatives. Workshops during Phase II will focus on the developed solution alternatives and will include formal public hearings on the Draft Programmatic EIR/EIS.

Public Meetings

The Program conducts public meetings throughout the state. The meetings provide an opportunity for interested publics to learn about the CALFED Bay-Delta Program and to comment on its efforts.

Other Activities

Additional public outreach activities include media relations, legislative briefings, presentations and briefings to interest groups and other organizations and production of educational and informational materials.



FACTS ABOUT THE DELTA

Total Size: 738,000 acres

Current Wetlands: 70,000 acres

Diversions from the Delta: 2,000

Total Diversions from the Delta and its Tributaries: 7,000

Diversions to the Central Valley Project and State Water Projects (the largest diverters): 6 million acre-feet/year*

Primary water source for more than 22 million Californians

Fish and Wildlife Species: 120+

Species Designated by the State or Federal Governments as Threatened or Endangered: 9

Species with Special Status: 40+

Extent of Delta Farmland: 527,309 acres

Extent of Delta Levees: 1,100 miles

Islands Converted since 1850 from Marshland to Agriculture and Other Uses: 57

Level to Which Some Islands Have Sunk Due to Soils Subsidence: 25 feet below the level of adjoining waterways

Delta Recreational Activities: camping, hiking, sightseeing, bicycling, horseback riding, boating, waterskiing, fishing, etc.

* An acre foot of water — 325,851 gallons — would cover one acre to a depth of one foot and would supply about 2 households for one year.

CALFED Agencies

State

- The Resources Agency of CA
 - Dept. of Fish and Game
 - Dept. of Water Resources
- CA Environmental Protection Agency
 - State Water Resources Control Board

Federal

- U.S. Environmental Protection Agency
- U.S. Dept. of the Interior
 - Fish and Wildlife Service
 - Bureau of Reclamation
- U.S. Dept. of Commerce
 - National Marine Fisheries Service

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